

SEQUENCE LISTING

<110> LeClair, Ken
Srivastava, Pramod K.

<120> Heat Shock Protein Binding Fragments of CD91, and Uses Thereof

<130> 8449-304-999

<150> PCT/US03/32167

<151> 2003-10-07

<150> 60/416,821

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<160> 17

<170> PatentIn version 3.2

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<212> DNA

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Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
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Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
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Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
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Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
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Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
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Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
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Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
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Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
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Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
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Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
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Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
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Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
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Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
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Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
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Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
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Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
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Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
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Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
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Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
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Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
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Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
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Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
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Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
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Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
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Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
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Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
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Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
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Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
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Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
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Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
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Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
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Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
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Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
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Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
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Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
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Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
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Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
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Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
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Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
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Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
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Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
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Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
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Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
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Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
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Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
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Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
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 675 680 685

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Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
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Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
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Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
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Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
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Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
835 840 845

Val Pro Pro Gly Gly Arg Leu Val Pro Arg Gly Ser Tyr Pro Tyr Asp
850 855 860

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Asp Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile
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Cys Pro Gln Ser Lys Ala Gln Arg Cys Pro Pro Asn Glu His Ser Cys
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Leu Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Ile
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Gln Asp Cys Met Asp Gly Ser Asp Glu Gly Ala His Cys Arg Glu Leu
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Arg Ala Asn Cys Ser Arg Met Gly Cys Gln His His Cys Val Pro Thr
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Pro Ser Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Glu Ala
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Cys Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Thr Cys Gly Cys
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Val Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys
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Asn Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe
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Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr
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Ala Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro
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His Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly
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Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe
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Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile
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Val Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His
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Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg
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Leu Glu Arg Gly Val Ala Gly Ala Pro Pro Thr Val Thr Leu Leu Arg
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Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala His Glu
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Gln Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser
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Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
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 260 265 270
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Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
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Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
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Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
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Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
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Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
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Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
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Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
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Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
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Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
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 Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
 915 920 925
 Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
 930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
 945 950 955 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
 965 970 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
 980 985 990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 995 1000 1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
 1010 1015 1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
 1025 1030 1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
 1040 1045 1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
 1055 1060 1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
 1070 1075 1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
 1085 1090 1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
 1100 1105 1110

Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
 1115 1120 1125

Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
 1130 1135 1140

Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
 1145 1150 1155

Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
 1160 1165 1170

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Gly	Ile	Leu	Phe	Trp	Thr	Asp	Trp	Asp	Ala	Ser	Leu	Pro	Arg	Ile
1400						1405					1410			
Glu	Ala	Ala	Ser	Met	Ser	Gly	Ala	Gly	Arg	Arg	Thr	Val	His	Arg
1415						1420					1425			
Glu	Thr	Gly	Ser	Gly	Gly	Trp	Pro	Asn	Gly	Leu	Thr	Val	Asp	Tyr
1430						1435					1440			
Leu	Glu	Lys	Arg	Ile	Leu	Trp	Ile	Asp	Ala	Arg	Ser	Asp	Ala	Ile
1445						1450					1455			
Tyr	Ser	Ala	Arg	Tyr	Asp	Gly	Ser	Gly	His	Met	Glu	Val	Leu	Arg
1460						1465					1470			
Gly	His	Glu	Phe	Leu	Ser	His	Pro	Phe	Ala	Val	Thr	Leu	Tyr	Gly
1475						1480					1485			
Gly	Glu	Val	Tyr	Trp	Thr	Asp	Trp	Arg	Thr	Asn	Thr	Leu	Ala	Lys
1490						1495					1500			
Ala	Asn	Lys	Trp	Thr	Gly	His	Asn	Val	Thr	Val	Val	Gln	Arg	Thr
1505						1510					1515			
Asn	Thr	Gln	Pro	Phe	Asp	Leu	Gln	Val	Tyr	His	Pro	Ser	Arg	Gln
1520						1525					1530			
Pro	Met	Ala	Pro	Asn	Pro	Cys	Glu	Ala	Asn	Gly	Gly	Gln	Gly	Pro
1535						1540					1545			
Cys	Ser	His	Leu	Cys	Leu	Ile	Asn	Tyr	Asn	Arg	Thr	Val	Ser	Cys
1550						1555					1560			
Ala	Cys	Pro	His	Leu	Met	Lys	Leu	His	Lys	Asp	Asn	Thr	Thr	Cys
1565						1570					1575			
Tyr	Glu	Phe	Lys	Lys	Phe	Leu	Leu	Tyr	Ala	Arg	Gln	Met	Glu	Ile
1580						1585					1590			
Arg	Gly	Val	Asp	Leu	Asp	Ala	Pro	Tyr	Tyr	Asn	Tyr	Ile	Ile	Ser
1595						1600					1605			
Phe	Thr	Val	Pro	Asp	Ile	Asp	Asn	Val	Thr	Val	Leu	Asp	Tyr	Asp
1610						1615					1620			

Ala	Arg	Glu	Gln	Arg	Val	Tyr	Trp	Ser	Asp	Val	Arg	Thr	Gln	Ala
1625						1630					1635			
Ile	Lys	Arg	Ala	Phe	Ile	Asn	Gly	Thr	Gly	Val	Glu	Thr	Val	Val
1640						1645					1650			
Ser	Ala	Asp	Leu	Pro	Asn	Ala	His	Gly	Leu	Ala	Val	Asp	Trp	Val
1655						1660					1665			
Ser	Arg	Asn	Leu	Phe	Trp	Thr	Ser	Tyr	Asp	Thr	Asn	Lys	Lys	Gln
1670						1675					1680			
Ile	Asn	Val	Ala	Arg	Leu	Asp	Gly	Ser	Phe	Lys	Asn	Ala	Val	Val
1685						1690					1695			
Gln	Gly	Leu	Glu	Gln	Pro	His	Gly	Leu	Val	Val	His	Pro	Leu	Arg
1700						1705					1710			
Gly	Lys	Leu	Tyr	Trp	Thr	Asp	Gly	Asp	Asn	Ile	Ser	Met	Ala	Asn
1715						1720					1725			
Met	Asp	Gly	Ser	Asn	Arg	Thr	Leu	Leu	Phe	Ser	Gly	Gln	Lys	Gly
1730						1735					1740			
Pro	Val	Gly	Leu	Ala	Ile	Asp	Phe	Pro	Glu	Ser	Lys	Leu	Tyr	Trp
1745						1750					1755			
Ile	Ser	Ser	Gly	Asn	His	Thr	Ile	Asn	Arg	Cys	Asn	Leu	Asp	Gly
1760						1765					1770			
Ser	Gly	Leu	Glu	Val	Ile	Asp	Ala	Met	Arg	Ser	Gln	Leu	Gly	Lys
1775						1780					1785			
Ala	Thr	Ala	Leu	Ala	Ile	Met	Gly	Asp	Lys	Leu	Trp	Trp	Ala	Asp
1790						1795					1800			
Gln	Val	Ser	Glu	Lys	Met	Gly	Thr	Cys	Ser	Lys	Ala	Asp	Gly	Ser
1805						1810					1815			
Gly	Ser	Val	Val	Leu	Arg	Asn	Ser	Thr	Thr	Leu	Val	Met	His	Met
1820						1825					1830			
Lys	Val	Tyr	Asp	Glu	Ser	Ile	Gln	Leu	Asp	His	Lys	Gly	Thr	Asn
1835						1840					1845			

Pro	Cys	Ser	Val	Asn	Asn	Gly	Asp	Cys	Ser	Gln	Leu	Cys	Leu	Pro
1850						1855					1860			
Thr	Ser	Glu	Thr	Thr	Arg	Ser	Cys	Met	Cys	Thr	Ala	Gly	Tyr	Ser
1865						1870					1875			
Leu	Arg	Ser	Gly	Gln	Gln	Ala	Cys	Glu	Gly	Val	Gly	Ser	Phe	Leu
1880						1885					1890			
Leu	Tyr	Ser	Val	His	Glu	Gly	Ile	Arg	Gly	Ile	Pro	Leu	Asp	Pro
1895						1900					1905			
Asn	Asp	Lys	Ser	Asp	Ala	Leu	Val	Pro	Val	Ser	Gly	Thr	Ser	Leu
1910						1915					1920			
Ala	Val	Gly	Ile	Asp	Phe	His	Ala	Glu	Asn	Asp	Thr	Ile	Tyr	Trp
1925						1930					1935			
Val	Asp	Met	Gly	Leu	Ser	Thr	Ile	Ser	Arg	Ala	Lys	Arg	Asp	Gln
1940						1945					1950			
Thr	Trp	Arg	Glu	Asp	Val	Val	Thr	Asn	Gly	Ile	Gly	Arg	Val	Glu
1955						1960					1965			
Gly	Ile	Ala	Val	Asp	Trp	Ile	Ala	Gly	Asn	Ile	Tyr	Trp	Thr	Asp
1970						1975					1980			
Gln	Gly	Phe	Asp	Val	Ile	Glu	Val	Ala	Arg	Leu	Asn	Gly	Ser	Phe
1985						1990					1995			
Arg	Tyr	Val	Val	Ile	Ser	Gln	Gly	Leu	Asp	Lys	Pro	Arg	Ala	Ile
2000						2005					2010			
Thr	Val	His	Pro	Glu	Lys	Gly	Tyr	Leu	Phe	Trp	Thr	Glu	Trp	Gly
2015						2020					2025			
Gln	Tyr	Pro	Arg	Ile	Glu	Arg	Ser	Arg	Leu	Asp	Gly	Thr	Glu	Arg
2030						2035					2040			
Val	Val	Leu	Val	Asn	Val	Ser	Ile	Ser	Trp	Pro	Asn	Gly	Ile	Ser
2045						2050					2055			
Val	Asp	Tyr	Gln	Asp	Gly	Lys	Leu	Tyr	Trp	Cys	Asp	Ala	Arg	Thr
2060						2065					2070			

Asp	Lys	Ile	Glu	Arg	Ile	Asp	Leu	Glu	Thr	Gly	Glu	Asn	Arg	Glu
2075						2080					2085			
Val	Val	Leu	Ser	Ser	Asn	Asn	Met	Asp	Met	Phe	Ser	Val	Ser	Val
2090						2095					2100			
Phe	Glu	Asp	Phe	Ile	Tyr	Trp	Ser	Asp	Arg	Thr	His	Ala	Asn	Gly
2105						2110					2115			
Ser	Ile	Lys	Arg	Gly	Ser	Lys	Asp	Asn	Ala	Thr	Asp	Ser	Val	Pro
2120						2125					2130			
Leu	Arg	Thr	Gly	Ile	Gly	Val	Gln	Leu	Lys	Asp	Ile	Lys	Val	Phe
2135						2140					2145			
Asn	Arg	Asp	Arg	Gln	Lys	Gly	Thr	Asn	Val	Cys	Ala	Val	Ala	Asn
2150						2155					2160			
Gly	Gly	Cys	Gln	Gln	Leu	Cys	Leu	Tyr	Arg	Gly	Arg	Gly	Gln	Arg
2165						2170					2175			
Ala	Cys	Ala	Cys	Ala	His	Gly	Met	Leu	Ala	Glu	Asp	Gly	Ala	Ser
2180						2185					2190			
Cys	Arg	Glu	Tyr	Ala	Gly	Tyr	Leu	Leu	Tyr	Ser	Glu	Arg	Thr	Ile
2195						2200					2205			
Leu	Lys	Ser	Ile	His	Leu	Ser	Asp	Glu	Arg	Asn	Leu	Asn	Ala	Pro
2210						2215					2220			
Val	Gln	Pro	Phe	Glu	Asp	Pro	Glu	His	Met	Lys	Asn	Val	Ile	Ala
2225						2230					2235			
Leu	Ala	Phe	Asp	Tyr	Arg	Ala	Gly	Thr	Ser	Pro	Gly	Thr	Pro	Asn
2240						2245					2250			
Arg	Ile	Phe	Phe	Ser	Asp	Ile	His	Phe	Gly	Asn	Ile	Gln	Gln	Ile
2255						2260					2265			
Asn	Asp	Asp	Gly	Ser	Arg	Arg	Ile	Thr	Ile	Val	Glu	Asn	Val	Gly
2270						2275					2280			
Ser	Val	Glu	Gly	Leu	Ala	Tyr	His	Arg	Gly	Trp	Asp	Thr	Leu	Tyr
2285						2290					2295			

Trp	Thr	Ser	Tyr	Thr	Thr	Ser	Thr	Ile	Thr	Arg	His	Thr	Val	Asp
2300						2305					2310			
Gln	Thr	Arg	Pro	Gly	Ala	Phe	Glu	Arg	Glu	Thr	Val	Ile	Thr	Met
2315						2320					2325			
Ser	Gly	Asp	Asp	His	Pro	Arg	Ala	Phe	Val	Leu	Asp	Glu	Cys	Gln
2330						2335					2340			
Asn	Leu	Met	Phe	Trp	Thr	Asn	Trp	Asn	Glu	Gln	His	Pro	Ser	Ile
2345						2350					2355			
Met	Arg	Ala	Ala	Leu	Ser	Gly	Ala	Asn	Val	Leu	Thr	Leu	Ile	Glu
2360						2365					2370			
Lys	Asp	Ile	Arg	Thr	Pro	Asn	Gly	Leu	Ala	Ile	Asp	His	Arg	Ala
2375						2380					2385			
Glu	Lys	Leu	Tyr	Phe	Ser	Asp	Ala	Thr	Leu	Asp	Lys	Ile	Glu	Arg
2390						2395					2400			
Cys	Glu	Tyr	Asp	Gly	Ser	His	Arg	Tyr	Val	Ile	Leu	Lys	Ser	Glu
2405						2410					2415			
Pro	Val	His	Pro	Phe	Gly	Leu	Ala	Val	Tyr	Gly	Glu	His	Ile	Phe
2420						2425					2430			
Trp	Thr	Asp	Trp	Val	Arg	Arg	Ala	Val	Gln	Arg	Ala	Asn	Lys	His
2435						2440					2445			
Val	Gly	Ser	Asn	Met	Lys	Leu	Leu	Arg	Val	Asp	Ile	Pro	Gln	Gln
2450						2455					2460			
Pro	Met	Gly	Ile	Ile	Ala	Val	Ala	Asn	Asp	Thr	Asn	Ser	Cys	Glu
2465						2470					2475			
Leu	Ser	Pro	Cys	Arg	Ile	Asn	Asn	Gly	Gly	Cys	Gln	Asp	Leu	Cys
2480						2485					2490			
Leu	Leu	Thr	His	Gln	Gly	His	Val	Asn	Cys	Ser	Cys	Arg	Gly	Gly
2495						2500					2505			
Arg	Ile	Leu	Gln	Asp	Asp	Leu	Thr	Cys	Arg	Ala	Val	Asn	Ser	Ser
2510						2515					2520			

Cys	Arg	Ala	Gln	Asp	Glu	Phe	Glu	Cys	Ala	Asn	Gly	Glu	Cys	Ile
2525						2530					2535			
Asn	Phe	Ser	Leu	Thr	Cys	Asp	Gly	Val	Pro	His	Cys	Lys	Asp	Lys
2540						2545					2550			
Ser	Asp	Glu	Lys	Pro	Ser	Tyr	Cys	Asn	Ser	Arg	Arg	Cys	Lys	Lys
2555						2560					2565			
Thr	Phe	Arg	Gln	Cys	Ser	Asn	Gly	Arg	Cys	Val	Ser	Asn	Met	Leu
2570						2575					2580			
Trp	Cys	Asn	Gly	Ala	Asp	Asp	Cys	Gly	Asp	Gly	Ser	Asp	Glu	Ile
2585						2590					2595			
Pro	Cys	Asn	Lys	Thr	Ala	Cys	Gly	Val	Gly	Glu	Phe	Arg	Cys	Arg
2600						2605					2610			
Asp	Gly	Thr	Cys	Ile	Gly	Asn	Ser	Ser	Arg	Cys	Asn	Gln	Phe	Val
2615						2620					2625			
Asp	Cys	Glu	Asp	Ala	Ser	Asp	Glu	Met	Asn	Cys	Ser	Ala	Thr	Asp
2630						2635					2640			
Cys	Ser	Ser	Tyr	Phe	Arg	Leu	Gly	Val	Lys	Gly	Val	Leu	Phe	Gln
2645						2650					2655			
Pro	Cys	Glu	Arg	Thr	Ser	Leu	Cys	Tyr	Ala	Pro	Ser	Trp	Val	Cys
2660						2665					2670			
Asp	Gly	Ala	Asn	Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Arg	Asp	Cys
2675						2680					2685			
Pro	Gly	Val	Lys	Arg	Pro	Arg	Cys	Pro	Leu	Asn	Tyr	Phe	Ala	Cys
2690						2695					2700			
Pro	Ser	Gly	Arg	Cys	Ile	Pro	Met	Ser	Trp	Thr	Cys	Asp	Lys	Glu
2705						2710					2715			
Asp	Asp	Cys	Glu	His	Gly	Glu	Asp	Glu	Thr	His	Cys	Asn	Lys	Phe
2720						2725					2730			
Cys	Ser	Glu	Ala	Gln	Phe	Glu	Cys	Gln	Asn	His	Arg	Cys	Ile	Ser
2735						2740					2745			

Lys	Gln	Trp	Leu	Cys	Asp	Gly	Ser	Asp	Asp	Cys	Gly	Asp	Gly	Ser
2750						2755					2760			
Asp	Glu	Ala	Ala	His	Cys	Glu	Gly	Lys	Thr	Cys	Gly	Pro	Ser	Ser
2765						2770					2775			
Phe	Ser	Cys	Pro	Gly	Thr	His	Val	Cys	Val	Pro	Glu	Arg	Trp	Leu
2780						2785					2790			
Cys	Asp	Gly	Asp	Lys	Asp	Cys	Ala	Asp	Gly	Ala	Asp	Glu	Ser	Ile
2795						2800					2805			
Ala	Ala	Gly	Cys	Leu	Tyr	Asn	Ser	Thr	Cys	Asp	Asp	Arg	Glu	Phe
2810						2815					2820			
Met	Cys	Gln	Asn	Arg	Gln	Cys	Ile	Pro	Lys	His	Phe	Val	Cys	Asp
2825						2830					2835			
His	Asp	Arg	Asp	Cys	Ala	Asp	Gly	Ser	Asp	Glu	Ser	Pro	Glu	Cys
2840						2845					2850			
Glu	Tyr	Pro	Thr	Cys	Gly	Pro	Ser	Glu	Phe	Arg	Cys	Ala	Asn	Gly
2855						2860					2865			
Arg	Cys	Leu	Ser	Ser	Arg	Gln	Trp	Glu	Cys	Asp	Gly	Glu	Asn	Asp
2870						2875					2880			
Cys	His	Asp	Gln	Ser	Asp	Glu	Ala	Pro	Lys	Asn	Pro	His	Cys	Thr
2885						2890					2895			
Ser	Pro	Glu	His	Lys	Cys	Asn	Ala	Ser	Ser	Gln	Phe	Leu	Cys	Ser
2900						2905					2910			
Ser	Gly	Arg	Cys	Val	Ala	Glu	Ala	Leu	Leu	Cys	Asn	Gly	Gln	Asp
2915						2920					2925			
Asp	Cys	Gly	Asp	Ser	Ser	Asp	Glu	Arg	Gly	Cys	His	Ile	Asn	Glu
2930						2935					2940			
Cys	Leu	Ser	Arg	Lys	Leu	Ser	Gly	Cys	Ser	Gln	Asp	Cys	Glu	Asp
2945						2950					2955			
Leu	Lys	Ile	Gly	Phe	Lys	Cys	Arg	Cys	Arg	Pro	Gly	Phe	Arg	Leu
2960						2965					2970			

Lys	Asp	Asp	Gly	Arg	Thr	Cys	Ala	Asp	Val	Asp	Glu	Cys	Ser	Thr
2975						2980					2985			
Thr	Phe	Pro	Cys	Ser	Gln	Arg	Cys	Ile	Asn	Thr	His	Gly	Ser	Tyr
2990						2995					3000			
Lys	Cys	Leu	Cys	Val	Glu	Gly	Tyr	Ala	Pro	Arg	Gly	Gly	Asp	Pro
3005						3010					3015			
His	Ser	Cys	Lys	Ala	Val	Thr	Asp	Glu	Glu	Pro	Phe	Leu	Ile	Phe
3020						3025					3030			
Ala	Asn	Arg	Tyr	Tyr	Leu	Arg	Lys	Leu	Asn	Leu	Asp	Gly	Ser	Asn
3035						3040					3045			
Tyr	Thr	Leu	Leu	Lys	Gln	Gly	Leu	Asn	Asn	Ala	Val	Ala	Leu	Asp
3050						3055					3060			
Phe	Asp	Tyr	Arg	Glu	Gln	Met	Ile	Tyr	Trp	Thr	Asp	Val	Thr	Thr
3065						3070					3075			
Gln	Gly	Ser	Met	Ile	Arg	Arg	Met	His	Leu	Asn	Gly	Ser	Asn	Val
3080						3085					3090			
Gln	Val	Leu	His	Arg	Thr	Gly	Leu	Ser	Asn	Pro	Asp	Gly	Leu	Ala
3095						3100					3105			
Val	Asp	Trp	Val	Gly	Gly	Asn	Leu	Tyr	Trp	Cys	Asp	Lys	Gly	Arg
3110						3115					3120			
Asp	Thr	Ile	Glu	Val	Ser	Lys	Leu	Asn	Gly	Ala	Tyr	Arg	Thr	Val
3125						3130					3135			
Leu	Val	Ser	Ser	Gly	Leu	Arg	Glu	Pro	Arg	Ala	Leu	Val	Val	Asp
3140						3145					3150			
Val	Gln	Asn	Gly	Tyr	Leu	Tyr	Trp	Thr	Asp	Trp	Gly	Asp	His	Ser
3155						3160					3165			
Leu	Ile	Gly	Arg	Ile	Gly	Met	Asp	Gly	Ser	Ser	Arg	Ser	Val	Ile
3170						3175					3180			
Val	Asp	Thr	Lys	Ile	Thr	Trp	Pro	Asn	Gly	Leu	Thr	Leu	Asp	Tyr
3185						3190					3195			

Val	Thr	Glu	Arg	Ile	Tyr	Trp	Ala	Asp	Ala	Arg	Glu	Asp	Tyr	Ile
3200						3205					3210			
Glu	Phe	Ala	Ser	Leu	Asp	Gly	Ser	Asn	Arg	His	Val	Val	Leu	Ser
3215						3220					3225			
Gln	Asp	Ile	Pro	His	Ile	Phe	Ala	Leu	Thr	Leu	Phe	Glu	Asp	Tyr
3230						3235					3240			
Val	Tyr	Trp	Thr	Asp	Trp	Glu	Thr	Lys	Ser	Ile	Asn	Arg	Ala	His
3245						3250					3255			
Lys	Thr	Thr	Gly	Thr	Asn	Lys	Thr	Leu	Leu	Ile	Ser	Thr	Leu	His
3260						3265					3270			
Arg	Pro	Met	Asp	Leu	His	Val	Phe	His	Ala	Leu	Arg	Gln	Pro	Asp
3275						3280					3285			
Val	Pro	Asn	His	Pro	Cys	Lys	Val	Asn	Asn	Gly	Gly	Cys	Ser	Asn
3290						3295					3300			
Leu	Cys	Leu	Leu	Ser	Pro	Gly	Gly	Gly	His	Lys	Cys	Ala	Cys	Pro
3305						3310					3315			
Thr	Asn	Phe	Tyr	Leu	Gly	Ser	Asp	Gly	Arg	Thr	Cys	Val	Ser	Asn
3320						3325					3330			
Cys	Thr	Ala	Ser	Gln	Phe	Val	Cys	Lys	Asn	Asp	Lys	Cys	Ile	Pro
3335						3340					3345			
Phe	Trp	Trp	Lys	Cys	Asp	Thr	Glu	Asp	Asp	Cys	Gly	Asp	His	Ser
3350						3355					3360			
Asp	Glu	Pro	Pro	Asp	Cys	Pro	Glu	Phe	Lys	Cys	Arg	Pro	Gly	Gln
3365						3370					3375			
Phe	Gln	Cys	Ser	Thr	Gly	Ile	Cys	Thr	Asn	Pro	Ala	Phe	Ile	Cys
3380						3385					3390			
Asp	Gly	Asp	Asn	Asp	Cys	Gln	Asp	Asn	Ser	Asp	Glu	Ala	Asn	Cys
3395						3400					3405			
Asp	Ile	His	Val	Cys	Leu	Pro	Ser	Gln	Phe	Lys	Cys	Thr	Asn	Thr
3410						3415					3420			

Asn	Arg	Cys	Ile	Pro	Gly	Ile	Phe	Arg	Cys	Asn	Gly	Gln	Asp	Asn
3425						3430					3435			
Cys	Gly	Asp	Gly	Glu	Asp	Glu	Arg	Asp	Cys	Pro	Glu	Val	Thr	Cys
3440						3445					3450			
Ala	Pro	Asn	Gln	Phe	Gln	Cys	Ser	Ile	Thr	Lys	Arg	Cys	Ile	Pro
3455						3460					3465			
Arg	Val	Trp	Val	Cys	Asp	Arg	Asp	Asn	Asp	Cys	Val	Asp	Gly	Ser
3470						3475					3480			
Asp	Glu	Pro	Ala	Asn	Cys	Thr	Gln	Met	Thr	Cys	Gly	Val	Asp	Glu
3485						3490					3495			
Phe	Arg	Cys	Lys	Asp	Ser	Gly	Arg	Cys	Ile	Pro	Ala	Arg	Trp	Lys
3500						3505					3510			
Cys	Asp	Gly	Glu	Asp	Asp	Cys	Gly	Asp	Gly	Ser	Asp	Glu	Pro	Lys
3515						3520					3525			
Glu	Glu	Cys	Asp	Glu	Arg	Thr	Cys	Glu	Pro	Tyr	Gln	Phe	Arg	Cys
3530						3535					3540			
Lys	Asn	Asn	Arg	Cys	Val	Pro	Gly	Arg	Trp	Gln	Cys	Asp	Tyr	Asp
3545						3550					3555			
Asn	Asp	Cys	Gly	Asp	Asn	Ser	Asp	Glu	Glu	Ser	Cys	Thr	Pro	Arg
3560						3565					3570			
Pro	Cys	Ser	Glu	Ser	Glu	Phe	Ser	Cys	Ala	Asn	Gly	Arg	Cys	Ile
3575						3580					3585			
Ala	Gly	Arg	Trp	Lys	Cys	Asp	Gly	Asp	His	Asp	Cys	Ala	Asp	Gly
3590						3595					3600			
Ser	Asp	Glu	Lys	Asp	Cys	Thr	Pro	Arg	Cys	Asp	Met	Asp	Gln	Phe
3605						3610					3615			
Gln	Cys	Lys	Ser	Gly	His	Cys	Ile	Pro	Leu	Arg	Trp	Arg	Cys	Asp
3620						3625					3630			
Ala	Asp	Ala	Asp	Cys	Met	Asp	Gly	Ser	Asp	Glu	Glu	Ala	Cys	Gly
3635						3640					3645			

Thr Gly	Val Arg Thr Cys	Pro	Leu Asp Glu Phe Gln	Cys Asn Asn
3650		3655		3660
Thr Leu	Cys Lys Pro Leu Ala	Trp Lys Cys Asp Gly	Glu Asp Asp	
3665		3670	3675	
Cys Gly	Asp Asn Ser Asp	Glu Asn Pro Glu Glu Cys	Ala Arg Phe	
3680		3685	3690	
Val Cys	Pro Pro Asn Arg	Pro Phe Arg Cys Lys Asn	Asp Arg Val	
3695		3700	3705	
Cys Leu	Trp Ile Gly Arg	Gln Cys Asp Gly Thr Asp	Asn Cys Gly	
3710		3715	3720	
Asp Gly	Thr Asp Glu Glu Asp	Cys Glu Pro Pro Thr	Ala His Thr	
3725		3730	3735	
Thr His	Cys Lys Asp Lys Lys	Glu Phe Leu Cys Arg	Asn Gln Arg	
3740		3745	3750	
Cys Leu	Ser Ser Ser Leu Arg	Cys Asn Met Phe Asp	Asp Cys Gly	
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Asp Gly	Ser Asp Glu Glu Asp	Cys Ser Ile Asp Pro	Lys Leu Thr	
3770		3775	3780	
Ser Cys	Ala Thr Asn Ala Ser	Ile Cys Gly Asp Glu	Ala Arg Cys	
3785		3790	3795	
Val Arg	Thr Glu Lys Ala Ala	Tyr Cys Ala Cys Arg	Ser Gly Phe	
3800		3805	3810	
His Thr	Val Pro Gly Gln Pro	Gly Cys Gln Asp Ile	Asn Glu Cys	
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Leu Arg	Phe Gly Thr Cys Ser	Gln Leu Cys Asn Asn	Thr Lys Gly	
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Gly His	Leu Cys Ser Cys Ala	Arg Asn Phe Met Lys	Thr His Asn	
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Thr Cys	Lys Ala Glu Gly Ser	Glu Tyr Gln Val Leu	Tyr Ile Ala	
3860		3865	3870	

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Ala	Tyr	Glu	Gln	Ala	Phe	Gln	Gly	Asp	Glu	Ser	Val	Arg	Ile	Asp
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Ala	Met	Asp	Val	His	Val	Lys	Ala	Gly	Arg	Val	Tyr	Trp	Thr	Asn
3905						3910					3915			
Trp	His	Thr	Gly	Thr	Ile	Ser	Tyr	Arg	Ser	Leu	Pro	Pro	Ala	Ala
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Pro	Pro	Thr	Thr	Ser	Asn	Arg	His	Arg	Arg	Gln	Ile	Asp	Arg	Gly
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Val	Thr	His	Leu	Asn	Ile	Ser	Gly	Leu	Lys	Met	Pro	Arg	Gly	Ile
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Ala	Ile	Asp	Trp	Val	Ala	Gly	Asn	Val	Tyr	Trp	Thr	Asp	Ser	Gly
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Arg	Asp	Val	Ile	Glu	Val	Ala	Gln	Met	Lys	Gly	Glu	Asn	Arg	Lys
3980						3985					3990			
Thr	Leu	Ile	Ser	Gly	Met	Ile	Asp	Glu	Pro	His	Ala	Ile	Val	Val
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Pro	Lys	Ile	Glu	Thr	Ala	Ala	Met	Asp	Gly	Thr	Leu	Arg	Glu	Thr
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Tyr	His	Asn	Glu	Arg	Leu	Tyr	Trp	Ala	Asp	Ala	Lys	Leu	Ser	Val
4055						4060					4065			
Ile	Gly	Ser	Ile	Arg	Leu	Asn	Gly	Thr	Asp	Pro	Ile	Val	Ala	Ala
4070						4075					4080			
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4085						4090					4095			

Glu	Asp	Tyr	Ile	Tyr	Gly	Val	Thr	Tyr	Ile	Asn	Asn	Arg	Val	Phe
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4130						4135					4140			
Gln	Pro	Glu	Val	Thr	Asn	Pro	Cys	Asp	Arg	Lys	Lys	Cys	Glu	Trp
4145						4150					4155			
Leu	Cys	Leu	Leu	Ser	Pro	Ser	Gly	Pro	Val	Cys	Thr	Cys	Pro	Asn
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Gly	Lys	Arg	Leu	Asp	Asn	Gly	Thr	Cys	Val	Pro	Val	Pro	Ser	Pro
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Arg	Val	Ala	Pro	Ser	Cys	Leu	Thr	Cys	Val	Gly	His	Cys	Ser	Asn
4370						4375					4380			
Gly	Gly	Ser	Cys	Thr	Met	Asn	Ser	Lys	Met	Met	Pro	Glu	Cys	Gln
4385						4390					4395			
Cys	Pro	Pro	His	Met	Thr	Gly	Pro	Arg	Cys	Glu	Glu	His	Val	Phe
4400						4405					4410			
Ser	Gln	Gln	Gln	Pro	Gly	His	Ile	Ala	Ser	Ile	Leu	Ile	Pro	Leu
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Leu	Leu	Leu	Leu	Leu	Leu	Val	Leu	Val	Ala	Gly	Val	Val	Phe	Trp
4430						4435					4440			
Tyr	Lys	Arg	Arg	Val	Gln	Gly	Ala	Lys	Gly	Phe	Gln	His	Gln	Arg
4445						4450					4455			
Met	Thr	Asn	Gly	Ala	Met	Asn	Val	Glu	Ile	Gly	Asn	Pro	Thr	Tyr
4460						4465					4470			
Lys	Met	Tyr	Glu	Gly	Gly	Glu	Pro	Asp	Asp	Val	Gly	Gly	Leu	Leu
4475						4480					4485			
Asp	Ala	Asp	Phe	Ala	Leu	Asp	Pro	Asp	Lys	Pro	Thr	Asn	Phe	Thr
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Asn	Pro	Val	Tyr	Ala	Thr	Leu	Tyr	Met	Gly	Gly	His	Gly	Ser	Arg
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His	Ser	Leu	Ala	Ser	Thr	Asp	Glu	Lys	Arg	Glu	Leu	Leu	Gly	Arg
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4535						4540								

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<211> 2565
 <212> PRT
 <213> H. sapiens

<400> 6

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Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
 20 25 30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
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Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
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Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
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Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
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Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
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Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
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Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
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Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
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Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
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Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
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Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
 610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
 625 630 635 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
 645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
 690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
725 730 735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
805 810 815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
885 890 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
900 905 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
915 920 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
 945 950 955 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
 965 970 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
 980 985 990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 995 1000 1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
 1010 1015 1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
 1025 1030 1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
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Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
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Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
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Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
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Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
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Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
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Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
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Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
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Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
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Asp	Gly	Ser	Asp	Glu	Gly	Glu	Leu	Cys	Asp	Gln	Cys	Ser	Leu	Asn
1175						1180					1185			
Asn	Gly	Gly	Cys	Ser	His	Asn	Cys	Ser	Val	Ala	Pro	Gly	Glu	Gly
1190						1195					1200			
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1205						1210					1215			
His	Thr	Cys	Gln	Ile	Gln	Ser	Tyr	Cys	Ala	Lys	His	Leu	Lys	Cys
1220						1225					1230			
Ser	Gln	Lys	Cys	Asp	Gln	Asn	Lys	Phe	Ser	Val	Lys	Cys	Ser	Cys
1235						1240					1245			
Tyr	Glu	Gly	Trp	Val	Leu	Glu	Pro	Asp	Gly	Glu	Ser	Cys	Arg	Ser
1250						1255					1260			
Leu	Asp	Pro	Phe	Lys	Pro	Phe	Ile	Ile	Phe	Ser	Asn	Arg	His	Glu
1265						1270					1275			
Ile	Arg	Arg	Ile	Asp	Leu	His	Lys	Gly	Asp	Tyr	Ser	Val	Leu	Val
1280						1285					1290			
Pro	Gly	Leu	Arg	Asn	Thr	Ile	Ala	Leu	Asp	Phe	His	Leu	Ser	Gln
1295						1300					1305			
Ser	Ala	Leu	Tyr	Trp	Thr	Asp	Val	Val	Glu	Asp	Lys	Ile	Tyr	Arg
1310						1315					1320			
Gly	Lys	Leu	Leu	Asp	Asn	Gly	Ala	Leu	Thr	Ser	Phe	Glu	Val	Val
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Ile	Gln	Tyr	Gly	Leu	Ala	Thr	Pro	Glu	Gly	Leu	Ala	Val	Asp	Trp
1340						1345					1350			
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1355						1360					1365			
Glu	Val	Ala	Lys	Leu	Asp	Gly	Thr	Leu	Arg	Thr	Thr	Leu	Leu	Ala
1370						1375					1380			
Gly	Asp	Ile	Glu	His	Pro	Arg	Ala	Ile	Ala	Leu	Asp	Pro	Arg	Asp
1385						1390					1395			

Gly	Ile	Leu	Phe	Trp	Thr	Asp	Trp	Asp	Ala	Ser	Leu	Pro	Arg	Ile
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Glu	Ala	Ala	Ser	Met	Ser	Gly	Ala	Gly	Arg	Arg	Thr	Val	His	Arg
1415						1420					1425			
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1430						1435					1440			
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1445						1450					1455			
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1460						1465					1470			
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1475						1480					1485			
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1490						1495					1500			
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1505						1510					1515			
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1565						1570					1575			
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1580						1585					1590			
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1595						1600					1605			
Phe	Thr	Val	Pro	Asp	Ile	Asp	Asn	Val	Thr	Val	Leu	Asp	Tyr	Asp
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1790						1795					1800			
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Pro	Cys	Ser	Val	Asn	Asn	Gly	Asp	Cys	Ser	Gln	Leu	Cys	Leu	Pro
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1985						1990					1995			
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Thr	Val	His	Pro	Glu	Lys	Gly	Tyr	Leu	Phe	Trp	Thr	Glu	Trp	Gly
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2030						2035					2040			
Val	Val	Leu	Val	Asn	Val	Ser	Ile	Ser	Trp	Pro	Asn	Gly	Ile	Ser
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Val	Asp	Tyr	Gln	Asp	Gly	Lys	Leu	Tyr	Trp	Cys	Asp	Ala	Arg	Thr
2060						2065					2070			

Asp	Lys	Ile	Glu	Arg	Ile	Asp	Leu	Glu	Thr	Gly	Glu	Asn	Arg	Glu
2075						2080					2085			
Val	Val	Leu	Ser	Ser	Asn	Asn	Met	Asp	Met	Phe	Ser	Val	Ser	Val
2090						2095					2100			
Phe	Glu	Asp	Phe	Ile	Tyr	Trp	Ser	Asp	Arg	Thr	His	Ala	Asn	Gly
2105						2110					2115			
Ser	Ile	Lys	Arg	Gly	Ser	Lys	Asp	Asn	Ala	Thr	Asp	Ser	Val	Pro
2120						2125					2130			
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2135						2140					2145			
Asn	Arg	Asp	Arg	Gln	Lys	Gly	Thr	Asn	Val	Cys	Ala	Val	Ala	Asn
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Gly	Gly	Cys	Gln	Gln	Leu	Cys	Leu	Tyr	Arg	Gly	Arg	Gly	Gln	Arg
2165						2170					2175			
Ala	Cys	Ala	Cys	Ala	His	Gly	Met	Leu	Ala	Glu	Asp	Gly	Ala	Ser
2180						2185					2190			
Cys	Arg	Glu	Tyr	Ala	Gly	Tyr	Leu	Leu	Tyr	Ser	Glu	Arg	Thr	Ile
2195						2200					2205			
Leu	Lys	Ser	Ile	His	Leu	Ser	Asp	Glu	Arg	Asn	Leu	Asn	Ala	Pro
2210						2215					2220			
Val	Gln	Pro	Phe	Glu	Asp	Pro	Glu	His	Met	Lys	Asn	Val	Ile	Ala
2225						2230					2235			
Leu	Ala	Phe	Asp	Tyr	Arg	Ala	Gly	Thr	Ser	Pro	Gly	Thr	Pro	Asn
2240						2245					2250			
Arg	Ile	Phe	Phe	Ser	Asp	Ile	His	Phe	Gly	Asn	Ile	Gln	Gln	Ile
2255						2260					2265			
Asn	Asp	Asp	Gly	Ser	Arg	Arg	Ile	Thr	Ile	Val	Glu	Asn	Val	Gly
2270						2275					2280			
Ser	Val	Glu	Gly	Leu	Ala	Tyr	His	Arg	Gly	Trp	Asp	Thr	Leu	Tyr
2285						2290					2295			

Trp	Thr	Ser	Tyr	Thr	Thr	Ser	Thr	Ile	Thr	Arg	His	Thr	Val	Asp
2300						2305					2310			
Gln	Thr	Arg	Pro	Gly	Ala	Phe	Glu	Arg	Glu	Thr	Val	Ile	Thr	Met
2315						2320					2325			
Ser	Gly	Asp	Asp	His	Pro	Arg	Ala	Phe	Val	Leu	Asp	Glu	Cys	Gln
2330						2335					2340			
Asn	Leu	Met	Phe	Trp	Thr	Asn	Trp	Asn	Glu	Gln	His	Pro	Ser	Ile
2345						2350					2355			
Met	Arg	Ala	Ala	Leu	Ser	Gly	Ala	Asn	Val	Leu	Thr	Leu	Ile	Glu
2360						2365					2370			
Lys	Asp	Ile	Arg	Thr	Pro	Asn	Gly	Leu	Ala	Ile	Asp	His	Arg	Ala
2375						2380					2385			
Glu	Lys	Leu	Tyr	Phe	Ser	Asp	Ala	Thr	Leu	Asp	Lys	Ile	Glu	Arg
2390						2395					2400			
Cys	Glu	Tyr	Asp	Gly	Ser	His	Arg	Tyr	Val	Ile	Leu	Lys	Ser	Glu
2405						2410					2415			
Pro	Val	His	Pro	Phe	Gly	Leu	Ala	Val	Tyr	Gly	Glu	His	Ile	Phe
2420						2425					2430			
Trp	Thr	Asp	Trp	Val	Arg	Arg	Ala	Val	Gln	Arg	Ala	Asn	Lys	His
2435						2440					2445			
Val	Gly	Ser	Asn	Met	Lys	Leu	Leu	Arg	Val	Asp	Ile	Pro	Gln	Gln
2450						2455					2460			
Pro	Met	Gly	Ile	Ile	Ala	Val	Ala	Asn	Asp	Thr	Asn	Ser	Cys	Glu
2465						2470					2475			
Leu	Ser	Pro	Cys	Arg	Ile	Asn	Asn	Gly	Gly	Cys	Gln	Asp	Leu	Cys
2480						2485					2490			
Leu	Leu	Thr	His	Gln	Gly	His	Val	Asn	Cys	Ser	Cys	Arg	Gly	Gly
2495						2500					2505			
Arg	Ile	Leu	Gln	Asp	Asp	Leu	Thr	Cys	Arg	Ala	Val	Gly	Gly	Arg
2510						2515					2520			

Leu Val Pro Arg Gly Ser Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
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Ile Glu Gly His Val Gly Leu Asn Asp Ile Phe Glu Ala Gln Lys
 2540 2545 2550

Ile Glu Trp His Glu Gly His His His His His His
 2555 2560 2565

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Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
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Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
 340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
 355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
 515 520 525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
 530 535 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
 545 550 555 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
 565 570 575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
 610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
 625 630 635 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
 645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
 690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
 705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
 725 730 735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
 740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
 755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
 770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
 785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
 805 810 815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
 820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
 835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
 850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
 865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
 885 890 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
900 905 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
915 920 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945 950 955 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
965 970 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
980 985 990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
995 1000 1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
1010 1015 1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
1025 1030 1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
1040 1045 1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
1055 1060 1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
1070 1075 1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
1085 1090 1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
1100 1105 1110

Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
1115 1120 1125

Asn	Asp	Cys	Glu	Asp	Asn	Ser	Asp	Glu	Glu	Asn	Cys	Glu	Ser	Leu
1130						1135					1140			
Ala	Cys	Arg	Pro	Pro	Ser	His	Pro	Cys	Ala	Asn	Asn	Thr	Ser	Val
1145						1150					1155			
Cys	Leu	Pro	Pro	Asp	Lys	Leu	Cys	Asp	Gly	Asn	Asp	Asp	Cys	Gly
1160						1165					1170			
Asp	Gly	Ser	Asp	Glu	Gly	Glu	Leu	Cys	Asp	Gln	Cys	Ser	Leu	Asn
1175						1180					1185			
Asn	Gly	Gly	Cys	Ser	His	Asn	Cys	Ser	Val	Ala	Pro	Gly	Glu	Gly
1190						1195					1200			
Ile	Val	Cys	Ser	Cys	Pro	Leu	Gly	Met	Glu	Leu	Gly	Pro	Asp	Asn
1205						1210					1215			
His	Thr	Cys	Gln	Ile	Gln	Ser	Tyr	Cys	Ala	Lys	His	Leu	Lys	Cys
1220						1225					1230			
Ser	Gln	Lys	Cys	Asp	Gln	Asn	Lys	Phe	Ser	Val	Lys	Cys	Ser	Cys
1235						1240					1245			
Tyr	Glu	Gly	Trp	Val	Leu	Glu	Pro	Asp	Gly	Glu	Ser	Cys	Arg	Ser
1250						1255					1260			
Leu	Asp	Pro	Phe	Lys	Pro	Phe	Ile	Ile	Phe	Ser	Asn	Arg	His	Glu
1265						1270					1275			
Ile	Arg	Arg	Ile	Asp	Leu	His	Lys	Gly	Asp	Tyr	Ser	Val	Leu	Val
1280						1285					1290			
Pro	Gly	Leu	Arg	Asn	Thr	Ile	Ala	Leu	Asp	Phe	His	Leu	Ser	Gln
1295						1300					1305			
Ser	Ala	Leu	Tyr	Trp	Thr	Asp	Val	Val	Glu	Asp	Lys	Ile	Tyr	Arg
1310						1315					1320			
Gly	Lys	Leu	Leu	Asp	Asn	Gly	Ala	Leu	Thr	Ser	Phe	Glu	Val	Val
1325						1330					1335			
Ile	Gln	Tyr	Gly	Leu	Ala	Thr	Pro	Glu	Gly	Leu	Ala	Val	Asp	Trp
1340						1345					1350			

Ile	Ala	Gly	Asn	Ile	Tyr	Trp	Val	Glu	Ser	Asn	Leu	Asp	Gln	Ile
1355						1360					1365			
Glu	Val	Ala	Lys	Leu	Asp	Gly	Thr	Leu	Arg	Thr	Thr	Leu	Leu	Ala
1370						1375					1380			
Gly	Asp	Ile	Glu	His	Pro	Arg	Ala	Ile	Ala	Leu	Asp	Pro	Arg	Asp
1385						1390					1395			
Gly	Ile	Leu	Phe	Trp	Thr	Asp	Trp	Asp	Ala	Ser	Leu	Pro	Arg	Ile
1400						1405					1410			
Glu	Ala	Ala	Ser	Met	Ser	Gly	Ala	Gly	Arg	Arg	Thr	Val	His	Arg
1415						1420					1425			
Glu	Thr	Gly	Ser	Gly	Gly	Trp	Pro	Asn	Gly	Leu	Thr	Val	Asp	Tyr
1430						1435					1440			
Leu	Glu	Lys	Arg	Ile	Leu	Trp	Ile	Asp	Ala	Arg	Ser	Asp	Ala	Ile
1445						1450					1455			
Tyr	Ser	Ala	Arg	Tyr	Asp	Gly	Ser	Gly	His	Met	Glu	Val	Leu	Arg
1460						1465					1470			
Gly	His	Glu	Phe	Leu	Ser	His	Pro	Phe	Ala	Val	Thr	Leu	Tyr	Gly
1475						1480					1485			
Gly	Glu	Val	Tyr	Trp	Thr	Asp	Trp	Arg	Thr	Asn	Thr	Leu	Ala	Lys
1490						1495					1500			
Ala	Asn	Lys	Trp	Thr	Gly	His	Asn	Val	Thr	Val	Val	Gln	Arg	Thr
1505						1510					1515			
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1520						1525					1530			
Pro	Met	Ala	Pro	Asn	Pro	Cys	Glu	Ala	Asn	Gly	Gly	Gln	Gly	Pro
1535						1540					1545			
Cys	Ser	His	Leu	Cys	Leu	Ile	Asn	Tyr	Asn	Arg	Thr	Val	Ser	Cys
1550						1555					1560			
Ala	Cys	Pro	His	Leu	Met	Lys	Leu	His	Lys	Asp	Asn	Thr	Thr	Cys
1565						1570					1575			

Tyr	Glu	Phe	Lys	Lys	Phe	Leu	Leu	Tyr	Ala	Arg	Gln	Met	Glu	Ile
1580						1585					1590			
Arg	Gly	Val	Asp	Leu	Asp	Ala	Pro	Tyr	Tyr	Asn	Tyr	Ile	Ile	Ser
1595						1600					1605			
Phe	Thr	Val	Pro	Asp	Ile	Asp	Asn	Val	Thr	Val	Leu	Asp	Tyr	Asp
1610						1615					1620			
Ala	Arg	Glu	Gln	Arg	Val	Tyr	Trp	Ser	Asp	Val	Arg	Thr	Gln	Ala
1625						1630					1635			
Ile	Lys	Arg	Ala	Phe	Ile	Asn	Gly	Thr	Gly	Val	Glu	Thr	Val	Val
1640						1645					1650			
Ser	Ala	Asp	Leu	Pro	Asn	Ala	His	Gly	Leu	Ala	Val	Asp	Trp	Val
1655						1660					1665			
Ser	Arg	Asn	Leu	Phe	Trp	Thr	Ser	Tyr	Asp	Thr	Asn	Lys	Lys	Gln
1670						1675					1680			
Ile	Asn	Val	Ala	Arg	Leu	Asp	Gly	Ser	Phe	Lys	Asn	Ala	Val	Val
1685						1690					1695			
Gln	Gly	Leu	Glu	Gln	Pro	His	Gly	Leu	Val	Val	His	Pro	Leu	Arg
1700						1705					1710			
Gly	Lys	Leu	Tyr	Trp	Thr	Asp	Gly	Asp	Asn	Ile	Ser	Met	Ala	Asn
1715						1720					1725			
Met	Asp	Gly	Ser	Asn	Arg	Thr	Leu	Leu	Phe	Ser	Gly	Gln	Lys	Gly
1730						1735					1740			
Pro	Val	Gly	Leu	Ala	Ile	Asp	Phe	Pro	Glu	Ser	Lys	Leu	Tyr	Trp
1745						1750					1755			
Ile	Ser	Ser	Gly	Asn	His	Thr	Ile	Asn	Arg	Cys	Asn	Leu	Asp	Gly
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Ser	Gly	Leu	Glu	Val	Ile	Asp	Ala	Met	Arg	Ser	Gln	Leu	Gly	Lys
1775						1780					1785			
Ala	Thr	Ala	Leu	Ala	Ile	Met	Gly	Asp	Lys	Leu	Trp	Trp	Ala	Asp
1790						1795					1800			

Gln Val	Ser Glu Lys Met	Gly Thr Cys Ser Lys	Ala Asp Gly Ser	1805	1810	1815
Gly Ser	Val Val Leu Arg	Asn Ser Thr Thr Leu	Val Met His Met	1820	1825	1830
Lys Val	Tyr Asp Glu Ser	Ile Gln Leu Asp His	Lys Gly Thr Asn	1835	1840	1845
Pro Cys	Ser Val Asn Asn	Gly Asp Cys Ser Gln	Leu Cys Leu Pro	1850	1855	1860
Thr Ser	Glu Thr Thr Arg	Ser Cys Met Cys Thr	Ala Gly Tyr Ser	1865	1870	1875
Leu Arg	Ser Gly Gln Gln	Ala Cys Glu Gly Val	Gly Ser Phe Leu	1880	1885	1890
Leu Tyr	Ser Val His Glu	Gly Ile Arg Gly Ile	Pro Leu Asp Pro	1895	1900	1905
Asn Asp	Lys Ser Asp Ala	Leu Val Pro Val Ser	Gly Thr Ser Leu	1910	1915	1920
Ala Val	Gly Ile Asp Phe	His Ala Glu Asn Asp	Thr Ile Tyr Trp	1925	1930	1935
Val Asp	Met Gly Leu Ser	Thr Ile Ser Arg Ala	Lys Arg Asp Gln	1940	1945	1950
Thr Trp	Arg Glu Asp Val	Val Thr Asn Gly Ile	Gly Arg Val Glu	1955	1960	1965
Gly Ile	Ala Val Asp Trp	Ile Ala Gly Asn Ile	Tyr Trp Thr Asp	1970	1975	1980
Gln Gly	Phe Asp Val Ile	Glu Val Ala Arg Leu	Asn Gly Ser Phe	1985	1990	1995
Arg Tyr	Val Val Ile Ser	Gln Gly Leu Asp Lys	Pro Arg Ala Ile	2000	2005	2010
Thr Val	His Pro Glu Lys	Gly Tyr Leu Phe Trp	Thr Glu Trp Gly	2015	2020	2025

Gln	Tyr	Pro	Arg	Ile	Glu	Arg	Ser	Arg	Leu	Asp	Gly	Thr	Glu	Arg
2030						2035					2040			
Val	Val	Leu	Val	Asn	Val	Ser	Ile	Ser	Trp	Pro	Asn	Gly	Ile	Ser
2045						2050					2055			
Val	Asp	Tyr	Gln	Asp	Gly	Lys	Leu	Tyr	Trp	Cys	Asp	Ala	Arg	Thr
2060						2065					2070			
Asp	Lys	Ile	Glu	Arg	Ile	Asp	Leu	Glu	Thr	Gly	Glu	Asn	Arg	Glu
2075						2080					2085			
Val	Val	Leu	Ser	Ser	Asn	Asn	Met	Asp	Met	Phe	Ser	Val	Ser	Val
2090						2095					2100			
Phe	Glu	Asp	Phe	Ile	Tyr	Trp	Ser	Asp	Arg	Thr	His	Ala	Asn	Gly
2105						2110					2115			
Ser	Ile	Lys	Arg	Gly	Ser	Lys	Asp	Asn	Ala	Thr	Asp	Ser	Val	Pro
2120						2125					2130			
Leu	Arg	Thr	Gly	Ile	Gly	Val	Gln	Leu	Lys	Asp	Ile	Lys	Val	Phe
2135						2140					2145			
Asn	Arg	Asp	Arg	Gln	Lys	Gly	Thr	Asn	Val	Cys	Ala	Val	Ala	Asn
2150						2155					2160			
Gly	Gly	Cys	Gln	Gln	Leu	Cys	Leu	Tyr	Arg	Gly	Arg	Gly	Gln	Arg
2165						2170					2175			
Ala	Cys	Ala	Cys	Ala	His	Gly	Met	Leu	Ala	Glu	Asp	Gly	Ala	Ser
2180						2185					2190			
Cys	Arg	Glu	Tyr	Ala	Gly	Tyr	Leu	Leu	Tyr	Ser	Glu	Arg	Thr	Ile
2195						2200					2205			
Leu	Lys	Ser	Ile	His	Leu	Ser	Asp	Glu	Arg	Asn	Leu	Asn	Ala	Pro
2210						2215					2220			
Val	Gln	Pro	Phe	Glu	Asp	Pro	Glu	His	Met	Lys	Asn	Val	Ile	Ala
2225						2230					2235			
Leu	Ala	Phe	Asp	Tyr	Arg	Ala	Gly	Thr	Ser	Pro	Gly	Thr	Pro	Asn
2240						2245					2250			

Arg	Ile	Phe	Phe	Ser	Asp	Ile	His	Phe	Gly	Asn	Ile	Gln	Gln	Ile
2255						2260					2265			
Asn	Asp	Asp	Gly	Ser	Arg	Arg	Ile	Thr	Ile	Val	Glu	Asn	Val	Gly
2270						2275					2280			
Ser	Val	Glu	Gly	Leu	Ala	Tyr	His	Arg	Gly	Trp	Asp	Thr	Leu	Tyr
2285						2290					2295			
Trp	Thr	Ser	Tyr	Thr	Thr	Ser	Thr	Ile	Thr	Arg	His	Thr	Val	Asp
2300						2305					2310			
Gln	Thr	Arg	Pro	Gly	Ala	Phe	Glu	Arg	Glu	Thr	Val	Ile	Thr	Met
2315						2320					2325			
Ser	Gly	Asp	Asp	His	Pro	Arg	Ala	Phe	Val	Leu	Asp	Glu	Cys	Gln
2330						2335					2340			
Asn	Leu	Met	Phe	Trp	Thr	Asn	Trp	Asn	Glu	Gln	His	Pro	Ser	Ile
2345						2350					2355			
Met	Arg	Ala	Ala	Leu	Ser	Gly	Ala	Asn	Val	Leu	Thr	Leu	Ile	Glu
2360						2365					2370			
Lys	Asp	Ile	Arg	Thr	Pro	Asn	Gly	Leu	Ala	Ile	Asp	His	Arg	Ala
2375						2380					2385			
Glu	Lys	Leu	Tyr	Phe	Ser	Asp	Ala	Thr	Leu	Asp	Lys	Ile	Glu	Arg
2390						2395					2400			
Cys	Glu	Tyr	Asp	Gly	Ser	His	Arg	Tyr	Val	Ile	Leu	Lys	Ser	Glu
2405						2410					2415			
Pro	Val	His	Pro	Phe	Gly	Leu	Ala	Val	Tyr	Gly	Glu	His	Ile	Phe
2420						2425					2430			
Trp	Thr	Asp	Trp	Val	Arg	Arg	Ala	Val	Gln	Arg	Ala	Asn	Lys	His
2435						2440					2445			
Val	Gly	Ser	Asn	Met	Lys	Leu	Leu	Arg	Val	Asp	Ile	Pro	Gln	Gln
2450						2455					2460			
Pro	Met	Gly	Ile	Ile	Ala	Val	Ala	Asn	Asp	Thr	Asn	Ser	Cys	Glu
2465						2470					2475			

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
 2480 2485 2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
 2495 2500 2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val
 2510 2515 2520

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Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
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Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
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Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
 515 520 525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
 530 535 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
 545 550 555 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
 565 570 575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
 610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
 625 630 635 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
 645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
 690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
 705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
 725 730 735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
 740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
 755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
 770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
 785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
 805 810 815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
 820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
 835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
 850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
 865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
 885 890 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
 900 905 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
 915 920 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
 930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
 945 950 955 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
 965 970 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
 980 985 990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 995 1000 1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
 1010 1015 1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
 1025 1030 1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
 1040 1045 1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
 1055 1060 1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
 1070 1075 1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
 1085 1090 1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
 1100 1105 1110

Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
 1115 1120 1125

Asn Asp 1130	Cys Glu Asp Asn Ser 1135	Asp Glu Glu Asn Cys 1140	Glu Ser Leu
Ala Cys 1145	Arg Pro Pro Ser His 1150	Pro Cys Ala Asn Asn 1155	Thr Ser Val
Cys Leu 1160	Pro Pro Asp Lys Leu 1165	Cys Asp Gly Asn Asp 1170	Asp Cys Gly
Asp Gly 1175	Ser Asp Glu Gly Glu 1180	Leu Cys Asp Gln Cys 1185	Ser Leu Asn
Asn Gly 1190	Gly Cys Ser His Asn 1195	Cys Ser Val Ala Pro 1200	Gly Glu Gly
Ile Val 1205	Cys Ser Cys Pro Leu 1210	Gly Met Glu Leu Gly 1215	Pro Asp Asn
His Thr 1220	Cys Gln Ile Gln Ser 1225	Tyr Cys Ala Lys His 1230	Leu Lys Cys
Ser Gln 1235	Lys Cys Asp Gln Asn 1240	Lys Phe Ser Val Lys 1245	Cys Ser Cys
Tyr Glu 1250	Gly Trp Val Leu Glu 1255	Pro Asp Gly Glu Ser 1260	Cys Arg Ser
Leu Asp 1265	Pro Phe Lys Pro Phe 1270	Ile Ile Phe Ser Asn 1275	Arg His Glu
Ile Arg 1280	Arg Ile Asp Leu His 1285	Lys Gly Asp Tyr Ser 1290	Val Leu Val
Pro Gly 1295	Leu Arg Asn Thr Ile 1300	Ala Leu Asp Phe His 1305	Leu Ser Gln
Ser Ala 1310	Leu Tyr Trp Thr Asp 1315	Val Val Glu Asp Lys 1320	Ile Tyr Arg
Gly Lys 1325	Leu Leu Asp Asn Gly 1330	Ala Leu Thr Ser Phe 1335	Glu Val Val
Ile Gln 1340	Tyr Gly Leu Ala Thr 1345	Pro Glu Gly Leu Ala 1350	Val Asp Trp

Ile	Ala	Gly	Asn	Ile	Tyr	Trp	Val	Glu	Ser	Asn	Leu	Asp	Gln	Ile
1355						1360					1365			
Glu	Val	Ala	Lys	Leu	Asp	Gly	Thr	Leu	Arg	Thr	Thr	Leu	Leu	Ala
1370						1375					1380			
Gly	Asp	Ile	Glu	His	Pro	Arg	Ala	Ile	Ala	Leu	Asp	Pro	Arg	Asp
1385						1390					1395			
Gly	Ile	Leu	Phe	Trp	Thr	Asp	Trp	Asp	Ala	Ser	Leu	Pro	Arg	Ile
1400						1405					1410			
Glu	Ala	Ala	Ser	Met	Ser	Gly	Ala	Gly	Arg	Arg	Thr	Val	His	Arg
1415						1420					1425			
Glu	Thr	Gly	Ser	Gly	Gly	Trp	Pro	Asn	Gly	Leu	Thr	Val	Asp	Tyr
1430						1435					1440			
Leu	Glu	Lys	Arg	Ile	Leu	Trp	Ile	Asp	Ala	Arg	Ser	Asp	Ala	Ile
1445						1450					1455			
Tyr	Ser	Ala	Arg	Tyr	Asp	Gly	Ser	Gly	His	Met	Glu	Val	Leu	Arg
1460						1465					1470			
Gly	His	Glu	Phe	Leu	Ser	His	Pro	Phe	Ala	Val	Thr	Leu	Tyr	Gly
1475						1480					1485			
Gly	Glu	Val	Tyr	Trp	Thr	Asp	Trp	Arg	Thr	Asn	Thr	Leu	Ala	Lys
1490						1495					1500			
Ala	Asn	Lys	Trp	Thr	Gly	His	Asn	Val	Thr	Val	Val	Gln	Arg	Thr
1505						1510					1515			
Asn	Thr	Gln	Pro	Phe	Asp	Leu	Gln	Val	Tyr	His	Pro	Ser	Arg	Gln
1520						1525					1530			
Pro	Met	Ala	Pro	Asn	Pro	Cys	Glu	Ala	Asn	Gly	Gly	Gln	Gly	Pro
1535						1540					1545			
Cys	Ser	His	Leu	Cys	Leu	Ile	Asn	Tyr	Asn	Arg	Thr	Val	Ser	Cys
1550						1555					1560			
Ala	Cys	Pro	His	Leu	Met	Lys	Leu	His	Lys	Asp	Asn	Thr	Thr	Cys
1565						1570					1575			

Tyr	Glu	Phe	Lys	Lys	Phe	Leu	Leu	Tyr	Ala	Arg	Gln	Met	Glu	Ile
1580						1585					1590			
Arg	Gly	Val	Asp	Leu	Asp	Ala	Pro	Tyr	Tyr	Asn	Tyr	Ile	Ile	Ser
1595						1600					1605			
Phe	Thr	Val	Pro	Asp	Ile	Asp	Asn	Val	Thr	Val	Leu	Asp	Tyr	Asp
1610						1615					1620			
Ala	Arg	Glu	Gln	Arg	Val	Tyr	Trp	Ser	Asp	Val	Arg	Thr	Gln	Ala
1625						1630					1635			
Ile	Lys	Arg	Ala	Phe	Ile	Asn	Gly	Thr	Gly	Val	Glu	Thr	Val	Val
1640						1645					1650			
Ser	Ala	Asp	Leu	Pro	Asn	Ala	His	Gly	Leu	Ala	Val	Asp	Trp	Val
1655						1660					1665			
Ser	Arg	Asn	Leu	Phe	Trp	Thr	Ser	Tyr	Asp	Thr	Asn	Lys	Lys	Gln
1670						1675					1680			
Ile	Asn	Val	Ala	Arg	Leu	Asp	Gly	Ser	Phe	Lys	Asn	Ala	Val	Val
1685						1690					1695			
Gln	Gly	Leu	Glu	Gln	Pro	His	Gly	Leu	Val	Val	His	Pro	Leu	Arg
1700						1705					1710			
Gly	Lys	Leu	Tyr	Trp	Thr	Asp	Gly	Asp	Asn	Ile	Ser	Met	Ala	Asn
1715						1720					1725			
Met	Asp	Gly	Ser	Asn	Arg	Thr	Leu	Leu	Phe	Ser	Gly	Gln	Lys	Gly
1730						1735					1740			
Pro	Val	Gly	Leu	Ala	Ile	Asp	Phe	Pro	Glu	Ser	Lys	Leu	Tyr	Trp
1745						1750					1755			
Ile	Ser	Ser	Gly	Asn	His	Thr	Ile	Asn	Arg	Cys	Asn	Leu	Asp	Gly
1760						1765					1770			
Ser	Gly	Leu	Glu	Val	Ile	Asp	Ala	Met	Arg	Ser	Gln	Leu	Gly	Lys
1775						1780					1785			
Ala	Thr	Ala	Leu	Ala	Ile	Met	Gly	Asp	Lys	Leu	Trp	Trp	Ala	Asp
1790						1795					1800			

Gln Val	Ser Glu Lys Met Gly	Thr Cys Ser Lys Ala	Asp Gly Ser
1805	1810	1815	
Gly Ser	Val Val Leu Arg Asn	Ser Thr Thr Leu Val	Met His Met
1820	1825	1830	
Lys Val	Tyr Asp Glu Ser Ile	Gln Leu Asp His Lys	Gly Thr Asn
1835	1840	1845	
Pro Cys	Ser Val Asn Asn Gly	Asp Cys Ser Gln Leu	Cys Leu Pro
1850	1855	1860	
Thr Ser	Glu Thr Thr Arg Ser	Cys Met Cys Thr Ala	Gly Tyr Ser
1865	1870	1875	
Leu Arg	Ser Gly Gln Gln Ala	Cys Glu Gly Val Gly	Ser Phe Leu
1880	1885	1890	
Leu Tyr	Ser Val His Glu Gly	Ile Arg Gly Ile Pro	Leu Asp Pro
1895	1900	1905	
Asn Asp	Lys Ser Asp Ala Leu	Val Pro Val Ser Gly	Thr Ser Leu
1910	1915	1920	
Ala Val	Gly Ile Asp Phe His	Ala Glu Asn Asp Thr	Ile Tyr Trp
1925	1930	1935	
Val Asp	Met Gly Leu Ser Thr	Ile Ser Arg Ala Lys	Arg Asp Gln
1940	1945	1950	
Thr Trp	Arg Glu Asp Val Val	Thr Asn Gly Ile Gly	Arg Val Glu
1955	1960	1965	
Gly Ile	Ala Val Asp Trp Ile	Ala Gly Asn Ile Tyr	Trp Thr Asp
1970	1975	1980	
Gln Gly	Phe Asp Val Ile Glu	Val Ala Arg Leu Asn	Gly Ser Phe
1985	1990	1995	
Arg Tyr	Val Val Ile Ser Gln	Gly Leu Asp Lys Pro	Arg Ala Ile
2000	2005	2010	
Thr Val	His Pro Glu Lys Gly	Tyr Leu Phe Trp Thr	Glu Trp Gly
2015	2020	2025	

Gln Tyr	Pro Arg	Ile Glu	Arg Ser	Arg Leu	Asp Gly	Thr Glu	Arg
2030			2035		2040		
Val Val	Leu Val	Asn Val	Ser Ile	Ser Trp	Pro Asn	Gly Ile	Ser
2045			2050		2055		
Val Asp	Tyr Gln	Asp Gly	Lys Leu	Tyr Trp	Cys Asp	Ala Arg	Thr
2060			2065		2070		
Asp Lys	Ile Glu	Arg Ile	Asp Leu	Glu Thr	Gly Glu	Asn Arg	Glu
2075			2080		2085		
Val Val	Leu Ser	Ser Asn	Asn Met	Asp Met	Phe Ser	Val Ser	Val
2090			2095		2100		
Phe Glu	Asp Phe	Ile Tyr	Trp Ser	Asp Arg	Thr His	Ala Asn	Gly
2105			2110		2115		
Ser Ile	Lys Arg	Gly Ser	Lys Asp	Asn Ala	Thr Asp	Ser Val	Pro
2120			2125		2130		
Leu Arg	Thr Gly	Ile Gly	Val Gln	Leu Lys	Asp Ile	Lys Val	Phe
2135			2140		2145		
Asn Arg	Asp Arg	Gln Lys	Gly Thr	Asn Val	Cys Ala	Val Ala	Asn
2150			2155		2160		
Gly Gly	Cys Gln	Gln Leu	Cys Leu	Tyr Arg	Gly Arg	Gly Gln	Arg
2165			2170		2175		
Ala Cys	Ala Cys	Ala His	Gly Met	Leu Ala	Glu Asp	Gly Ala	Ser
2180			2185		2190		
Cys Arg	Glu Tyr	Ala Gly	Tyr Leu	Leu Tyr	Ser Glu	Arg Thr	Ile
2195			2200		2205		
Leu Lys	Ser Ile	His Leu	Ser Asp	Glu Arg	Asn Leu	Asn Ala	Pro
2210			2215		2220		
Val Gln	Pro Phe	Glu Asp	Pro Glu	His Met	Lys Asn	Val Ile	Ala
2225			2230		2235		
Leu Ala	Phe Asp	Tyr Arg	Ala Gly	Thr Ser	Pro Gly	Thr Pro	Asn
2240			2245		2250		

Arg	Ile	Phe	Phe	Ser	Asp	Ile	His	Phe	Gly	Asn	Ile	Gln	Gln	Ile
2255						2260					2265			
Asn	Asp	Asp	Gly	Ser	Arg	Arg	Ile	Thr	Ile	Val	Glu	Asn	Val	Gly
2270						2275					2280			
Ser	Val	Glu	Gly	Leu	Ala	Tyr	His	Arg	Gly	Trp	Asp	Thr	Leu	Tyr
2285						2290					2295			
Trp	Thr	Ser	Tyr	Thr	Thr	Ser	Thr	Ile	Thr	Arg	His	Thr	Val	Asp
2300						2305					2310			
Gln	Thr	Arg	Pro	Gly	Ala	Phe	Glu	Arg	Glu	Thr	Val	Ile	Thr	Met
2315						2320					2325			
Ser	Gly	Asp	Asp	His	Pro	Arg	Ala	Phe	Val	Leu	Asp	Glu	Cys	Gln
2330						2335					2340			
Asn	Leu	Met	Phe	Trp	Thr	Asn	Trp	Asn	Glu	Gln	His	Pro	Ser	Ile
2345						2350					2355			
Met	Arg	Ala	Ala	Leu	Ser	Gly	Ala	Asn	Val	Leu	Thr	Leu	Ile	Glu
2360						2365					2370			
Lys	Asp	Ile	Arg	Thr	Pro	Asn	Gly	Leu	Ala	Ile	Asp	His	Arg	Ala
2375						2380					2385			
Glu	Lys	Leu	Tyr	Phe	Ser	Asp	Ala	Thr	Leu	Asp	Lys	Ile	Glu	Arg
2390						2395					2400			
Cys	Glu	Tyr	Asp	Gly	Ser	His	Arg	Tyr	Val	Ile	Leu	Lys	Ser	Glu
2405						2410					2415			
Pro	Val	His	Pro	Phe	Gly	Leu	Ala	Val	Tyr	Gly	Glu	His	Ile	Phe
2420						2425					2430			
Trp	Thr	Asp	Trp	Val	Arg	Arg	Ala	Val	Gln	Arg	Ala	Asn	Lys	His
2435						2440					2445			
Val	Gly	Ser	Asn	Met	Lys	Leu	Leu	Arg	Val	Asp	Ile	Pro	Gln	Gln
2450						2455					2460			
Pro	Met	Gly	Ile	Ile	Ala	Val	Ala	Asn	Asp	Thr	Asn	Ser	Cys	Glu
2465						2470					2475			

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
 2480 2485 2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
 2495 2500 2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser
 2510 2515 2520

Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile
 2525 2530 2535

Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
 2540 2545 2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
 2555 2560 2565

Thr Phe Arg Gln Cys Ser Asn Gly Arg Cys Val Ser Asn Met Leu
 2570 2575 2580

Trp Cys Asn Gly Ala Asp Asp Cys Gly Asp Gly Ser Asp Glu Ile
 2585 2590 2595

Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg
 2600 2605 2610

Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val
 2615 2620 2625

Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp
 2630 2635 2640

Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln
 2645 2650 2655

Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys
 2660 2665 2670

Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
 2675 2680 2685

Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
 2690 2695 2700

Pro	Ser	Gly	Arg	Cys	Ile	Pro	Met	Ser	Trp	Thr	Cys	Asp	Lys	Glu
2705						2710					2715			
Asp	Asp	Cys	Glu	His	Gly	Glu	Asp	Glu	Thr	His	Cys	Asn	Lys	Phe
2720						2725					2730			
Cys	Ser	Glu	Ala	Gln	Phe	Glu	Cys	Gln	Asn	His	Arg	Cys	Ile	Ser
2735						2740					2745			
Lys	Gln	Trp	Leu	Cys	Asp	Gly	Ser	Asp	Asp	Cys	Gly	Asp	Gly	Ser
2750						2755					2760			
Asp	Glu	Ala	Ala	His	Cys	Glu	Gly	Lys	Thr	Cys	Gly	Pro	Ser	Ser
2765						2770					2775			
Phe	Ser	Cys	Pro	Gly	Thr	His	Val	Cys	Val	Pro	Glu	Arg	Trp	Leu
2780						2785					2790			
Cys	Asp	Gly	Asp	Lys	Asp	Cys	Ala	Asp	Gly	Ala	Asp	Glu	Ser	Ile
2795						2800					2805			
Ala	Ala	Gly	Cys	Leu	Tyr	Asn	Ser	Thr	Cys	Asp	Asp	Arg	Glu	Phe
2810						2815					2820			
Met	Cys	Gln	Asn	Arg	Gln	Cys	Ile	Pro	Lys	His	Phe	Val	Cys	Asp
2825						2830					2835			
His	Asp	Arg	Asp	Cys	Ala	Asp	Gly	Ser	Asp	Glu	Ser	Pro	Glu	Cys
2840						2845					2850			
Glu	Tyr	Pro	Thr	Cys	Gly	Pro	Ser	Glu	Phe	Arg	Cys	Ala	Asn	Gly
2855						2860					2865			
Arg	Cys	Leu	Ser	Ser	Arg	Gln	Trp	Glu	Cys	Asp	Gly	Glu	Asn	Asp
2870						2875					2880			
Cys	His	Asp	Gln	Ser	Asp	Glu	Ala	Pro	Lys	Asn	Pro	His	Cys	Thr
2885						2890					2895			
Ser	Pro	Glu	His	Lys	Cys	Asn	Ala	Ser	Ser	Gln	Phe	Leu	Cys	Ser
2900						2905					2910			
Ser	Gly	Arg	Cys	Val	Ala	Glu	Ala	Leu	Leu	Cys	Asn	Gly	Gln	Asp
2915						2920					2925			

Asp	Cys	Gly	Asp	Ser	Ser	Asp	Glu	Arg	Gly	Cys	His	Ile	Asn	Glu
2930						2935					2940			
Cys	Leu	Ser	Arg	Lys	Leu	Ser	Gly	Cys	Ser	Gln	Asp	Cys	Glu	Asp
2945						2950					2955			
Leu	Lys	Ile	Gly	Phe	Lys	Cys	Arg	Cys	Arg	Pro	Gly	Phe	Arg	Leu
2960						2965					2970			
Lys	Asp	Asp	Gly	Arg	Thr	Cys	Ala	Asp	Val	Asp	Glu	Cys	Ser	Thr
2975						2980					2985			
Thr	Phe	Pro	Cys	Ser	Gln	Arg	Cys	Ile	Asn	Thr	His	Gly	Ser	Tyr
2990						2995					3000			
Lys	Cys	Leu	Cys	Val	Glu	Gly	Tyr	Ala	Pro	Arg	Gly	Gly	Asp	Pro
3005						3010					3015			
His	Ser	Cys	Lys	Ala	Val	Thr	Asp	Glu	Glu	Pro	Phe	Leu	Ile	Phe
3020						3025					3030			
Ala	Asn	Arg	Tyr	Tyr	Leu	Arg	Lys	Leu	Asn	Leu	Asp	Gly	Ser	Asn
3035						3040					3045			
Tyr	Thr	Leu	Leu	Lys	Gln	Gly	Leu	Asn	Asn	Ala	Val	Ala	Leu	Asp
3050						3055					3060			
Phe	Asp	Tyr	Arg	Glu	Gln	Met	Ile	Tyr	Trp	Thr	Asp	Val	Thr	Thr
3065						3070					3075			
Gln	Gly	Ser	Met	Ile	Arg	Arg	Met	His	Leu	Asn	Gly	Ser	Asn	Val
3080						3085					3090			
Gln	Val	Leu	His	Arg	Thr	Gly	Leu	Ser	Asn	Pro	Asp	Gly	Leu	Ala
3095						3100					3105			
Val	Asp	Trp	Val	Gly	Gly	Asn	Leu	Tyr	Trp	Cys	Asp	Lys	Gly	Arg
3110						3115					3120			
Asp	Thr	Ile	Glu	Val	Ser	Lys	Leu	Asn	Gly	Ala	Tyr	Arg	Thr	Val
3125						3130					3135			
Leu	Val	Ser	Ser	Gly	Leu	Arg	Glu	Pro	Arg	Ala	Leu	Val	Val	Asp
3140						3145					3150			

Val	Gln	Asn	Gly	Tyr	Leu	Tyr	Trp	Thr	Asp	Trp	Gly	Asp	His	Ser
3155						3160					3165			
Leu	Ile	Gly	Arg	Ile	Gly	Met	Asp	Gly	Ser	Ser	Arg	Ser	Val	Ile
3170						3175					3180			
Val	Asp	Thr	Lys	Ile	Thr	Trp	Pro	Asn	Gly	Leu	Thr	Leu	Asp	Tyr
3185						3190					3195			
Val	Thr	Glu	Arg	Ile	Tyr	Trp	Ala	Asp	Ala	Arg	Glu	Asp	Tyr	Ile
3200						3205					3210			
Glu	Phe	Ala	Ser	Leu	Asp	Gly	Ser	Asn	Arg	His	Val	Val	Leu	Ser
3215						3220					3225			
Gln	Asp	Ile	Pro	His	Ile	Phe	Ala	Leu	Thr	Leu	Phe	Glu	Asp	Tyr
3230						3235					3240			
Val	Tyr	Trp	Thr	Asp	Trp	Glu	Thr	Lys	Ser	Ile	Asn	Arg	Ala	His
3245						3250					3255			
Lys	Thr	Thr	Gly	Thr	Asn	Lys	Thr	Leu	Leu	Ile	Ser	Thr	Leu	His
3260						3265					3270			
Arg	Pro	Met	Asp	Leu	His	Val	Phe	His	Ala	Leu	Arg	Gln	Pro	Asp
3275						3280					3285			
Val	Pro	Asn	His	Pro	Cys	Lys	Val	Asn	Asn	Gly	Gly	Cys	Ser	Asn
3290						3295					3300			
Leu	Cys	Leu	Leu	Ser	Pro	Gly	Gly	Gly	His	Lys	Cys	Ala	Cys	Pro
3305						3310					3315			
Thr	Asn	Phe	Tyr	Leu	Gly	Ser	Asp	Gly	Arg	Thr	Cys	Val	Ser	Asn
3320						3325					3330			
Cys	Thr	Ala	Ser	Gln	Phe	Val	Cys	Lys	Asn	Asp	Lys	Cys	Ile	Pro
3335						3340					3345			
Phe	Trp	Trp	Lys	Cys	Asp	Thr	Glu	Asp	Asp	Cys	Gly	Asp	His	Ser
3350						3355					3360			
Asp	Glu	Pro	Pro	Asp	Cys	Pro	Glu	Phe	Lys	Cys	Arg	Pro	Gly	Gln
3365						3370					3375			

Phe	Gln	Cys	Ser	Thr	Gly	Ile	Cys	Thr	Asn	Pro	Ala	Phe	Ile	Cys
3380						3385					3390			
Asp	Gly	Asp	Asn	Asp	Cys	Gln	Asp	Asn	Ser	Asp	Glu	Ala	Asn	Cys
3395						3400					3405			
Asp	Ile	His	Val	Cys	Leu	Pro	Ser	Gln	Phe	Lys	Cys	Thr	Asn	Thr
3410						3415					3420			
Asn	Arg	Cys	Ile	Pro	Gly	Ile	Phe	Arg	Cys	Asn	Gly	Gln	Asp	Asn
3425						3430					3435			
Cys	Gly	Asp	Gly	Glu	Asp	Glu	Arg	Asp	Cys	Pro	Glu	Val	Thr	Cys
3440						3445					3450			
Ala	Pro	Asn	Gln	Phe	Gln	Cys	Ser	Ile	Thr	Lys	Arg	Cys	Ile	Pro
3455						3460					3465			
Arg	Val	Trp	Val	Cys	Asp	Arg	Asp	Asn	Asp	Cys	Val	Asp	Gly	Ser
3470						3475					3480			
Asp	Glu	Pro	Ala	Asn	Cys	Thr	Gln	Met	Thr	Cys	Gly	Val	Asp	Glu
3485						3490					3495			
Phe	Arg	Cys	Lys	Asp	Ser	Gly	Arg	Cys	Ile	Pro	Ala	Arg	Trp	Lys
3500						3505					3510			
Cys	Asp	Gly	Glu	Asp	Asp	Cys	Gly	Asp	Gly	Ser	Asp	Glu	Pro	Lys
3515						3520					3525			
Glu	Glu	Cys	Asp	Glu	Arg	Thr	Cys	Glu	Pro	Tyr	Gln	Phe	Arg	Cys
3530						3535					3540			
Lys	Asn	Asn	Arg	Cys	Val	Pro	Gly	Arg	Trp	Gln	Cys	Asp	Tyr	Asp
3545						3550					3555			
Asn	Asp	Cys	Gly	Asp	Asn	Ser	Asp	Glu	Glu	Ser	Cys	Thr	Pro	Arg
3560						3565					3570			
Pro	Cys	Ser	Glu	Ser	Glu	Phe	Ser	Cys	Ala	Asn	Gly	Arg	Cys	Ile
3575						3580					3585			
Ala	Gly	Arg	Trp	Lys	Cys	Asp	Gly	Asp	His	Asp	Cys	Ala	Asp	Gly
3590						3595					3600			

Ser	Asp	Glu	Lys	Asp	Cys	Thr	Pro	Arg	Cys	Asp	Met	Asp	Gln	Phe
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Gln	Cys	Lys	Ser	Gly	His	Cys	Ile	Pro	Leu	Arg	Trp	Arg	Cys	Asp
3620						3625					3630			
Ala	Asp	Ala	Asp	Cys	Met	Asp	Gly	Ser	Asp	Glu	Glu	Ala	Cys	Gly
3635						3640					3645			
Thr	Gly	Val	Arg	Thr	Cys	Pro	Leu	Asp	Glu	Phe	Gln	Cys	Asn	Asn
3650						3655					3660			
Thr	Leu	Cys	Lys	Pro	Leu	Ala	Trp	Lys	Cys	Asp	Gly	Glu	Asp	Asp
3665						3670					3675			
Cys	Gly	Asp	Asn	Ser	Asp	Glu	Asn	Pro	Glu	Glu	Cys	Ala	Arg	Phe
3680						3685					3690			
Val	Cys	Pro	Pro	Asn	Arg	Pro	Phe	Arg	Cys	Lys	Asn	Asp	Arg	Val
3695						3700					3705			
Cys	Leu	Trp	Ile	Gly	Arg	Gln	Cys	Asp	Gly	Thr	Asp	Asn	Cys	Gly
3710						3715					3720			
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3725						3730					3735			
Thr	His	Cys	Lys	Asp	Lys	Lys	Glu	Phe	Leu	Cys	Arg	Asn	Gln	Arg
3740						3745					3750			
Cys	Leu	Ser	Ser	Ser	Leu	Arg	Cys	Asn	Met	Phe	Asp	Asp	Cys	Gly
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Asp	Gly	Ser	Asp	Glu	Glu	Asp	Cys	Ser	Ile	Asp	Pro	Lys	Leu	Thr
3770						3775					3780			
Ser	Cys	Ala	Thr	Asn	Ala	Ser	Ile	Cys	Gly	Asp	Glu	Ala	Arg	Cys
3785						3790					3795			
Val	Arg	Thr	Glu	Lys	Ala	Ala	Tyr	Cys	Ala	Cys	Arg	Ser	Gly	Phe
3800						3805					3810			
His	Thr	Val	Pro	Gly	Gln	Pro	Gly	Cys	Gln	Asp	Ile	Asn	Glu	Cys
3815						3820					3825			

Leu	Arg	Phe	Gly	Thr	Cys	Ser	Gln	Leu	Cys	Asn	Asn	Thr	Lys	Gly
3830						3835					3840			
Gly	His	Leu	Cys	Ser	Cys	Ala	Arg	Asn	Phe	Met	Lys	Thr	His	Asn
3845						3850					3855			
Thr	Cys	Lys	Ala	Glu	Gly	Ser	Glu	Tyr	Gln	Val	Leu	Tyr	Ile	Ala
3860						3865					3870			
Asp	Asp	Asn	Glu	Ile	Arg	Ser	Leu	Phe	Pro	Gly	His	Pro	His	Ser
3875						3880					3885			
Ala	Tyr	Glu	Gln	Ala	Phe	Gln	Gly	Asp	Glu	Ser	Val	Arg	Ile	Asp
3890						3895					3900			
Ala	Met	Asp	Val	His	Val	Lys	Ala	Gly	Arg	Val	Tyr	Trp	Thr	Asn
3905						3910					3915			
Trp	His	Thr	Gly	Thr	Ile	Ser	Tyr	Arg	Ser	Leu	Pro	Pro	Ala	Ala
3920						3925					3930			
Pro	Pro	Thr	Thr	Ser	Asn	Arg	His	Arg	Arg	Gln	Ile	Asp	Arg	Gly
3935						3940					3945			
Val	Thr	His	Leu	Asn	Ile	Ser	Gly	Leu	Lys	Met	Pro	Arg	Gly	Ile
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Ala	Ile	Asp	Trp	Val	Ala	Gly	Asn	Val	Tyr	Trp	Thr	Asp	Ser	Gly
3965						3970					3975			
Arg	Asp	Val	Ile	Glu	Val	Ala	Gln	Met	Lys	Gly	Glu	Asn	Arg	Lys
3980						3985					3990			
Thr	Leu	Ile	Ser	Gly	Met	Ile	Asp	Glu	Pro	His	Ala	Ile	Val	Val
3995						4000					4005			
Asp	Pro	Leu	Arg	Gly	Thr	Met	Tyr	Trp	Ser	Asp	Trp	Gly	Asn	His
4010						4015					4020			
Pro	Lys	Ile	Glu	Thr	Ala	Ala	Met	Asp	Gly	Thr	Leu	Arg	Glu	Thr
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Leu	Val	Gln	Asp	Asn	Ile	Gln	Trp	Pro	Thr	Gly	Leu	Ala	Val	Asp
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Tyr	His	Asn	Glu	Arg	Leu	Tyr	Trp	Ala	Asp	Ala	Lys	Leu	Ser	Val
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Ile	Gly	Ser	Ile	Arg	Leu	Asn	Gly	Thr	Asp	Pro	Ile	Val	Ala	Ala
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Asp	Ser	Lys	Arg	Gly	Leu	Ser	His	Pro	Phe	Ser	Ile	Asp	Val	Phe
4085						4090					4095			
Glu	Asp	Tyr	Ile	Tyr	Gly	Val	Thr	Tyr	Ile	Asn	Asn	Arg	Val	Phe
4100						4105					4110			
Lys	Ile	His	Lys	Phe	Gly	His	Ser	Pro	Leu	Val	Asn	Leu	Thr	Gly
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Gly	Leu	Ser	His	Ala	Ser	Asp	Val	Val	Leu	Tyr	His	Gln	His	Lys
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Gln	Pro	Glu	Val	Thr	Asn	Pro	Cys	Asp	Arg	Lys	Lys	Cys	Glu	Trp
4145						4150					4155			
Leu	Cys	Leu	Leu	Ser	Pro	Ser	Gly	Pro	Val	Cys	Thr	Cys	Pro	Asn
4160						4165					4170			
Gly	Lys	Arg	Leu	Asp	Asn	Gly	Thr	Cys	Val	Pro	Val	Pro	Ser	Pro
4175						4180					4185			
Thr	Pro	Pro	Pro	Asp	Ala	Pro	Arg	Pro	Gly	Thr	Cys	Asn	Leu	Gln
4190						4195					4200			
Cys	Phe	Asn	Gly	Gly	Ser	Cys	Phe	Leu	Asn	Ala	Arg	Arg	Gln	Pro
4205						4210					4215			
Lys	Cys	Arg	Cys	Gln	Pro	Arg	Tyr	Thr	Gly	Asp	Lys	Cys	Glu	Leu
4220						4225					4230			
Asp	Gln	Cys	Trp	Glu	His	Cys	Arg	Asn	Gly	Gly	Thr	Cys	Ala	Ala
4235						4240					4245			
Ser	Pro	Ser	Gly	Met	Pro	Thr	Cys	Arg	Cys	Pro	Thr	Gly	Phe	Thr
4250						4255					4260			
Gly	Pro	Lys	Cys	Thr	Gln	Gln	Val	Cys	Ala	Gly	Tyr	Cys	Ala	Asn
4265						4270					4275			

Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
 4280 4285 4290

Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys
 4295 4300 4305

Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
 4310 4315 4320

Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg
 4325 4330 4335

Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
 4340 4345 4350

Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
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Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn
 4370 4375 4380

Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln
 4385 4390 4395

Cys Pro Pro His Met Thr Gly Pro Arg Cys Glu Glu His Val Phe
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Ser Gln Gln Gln Pro Gly Gly Gly Arg Leu Val Pro Arg Gly Ser
 4415 4420 4425

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Ile Glu Gly His Val Gly
 4430 4435 4440

Leu Asn Asp Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu Gly
 4445 4450 4455

His His His His His His
 4460

<210> 9
 <211> 4419
 <212> PRT
 <213> H. sapiens

<400> 9

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1 5 10 15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
20 25 30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465 470 475 480

Asp	Gln	Tyr	Gly	Lys	Pro	Gly	Gly	Cys	Ser	Asp	Ile	Cys	Leu	Leu	Ala	
				485					490						495	
Asn	Ser	His	Lys	Ala	Arg	Thr	Cys	Arg	Cys	Arg	Ser	Gly	Phe	Ser	Leu	
			500					505					510			
Gly	Ser	Asp	Gly	Lys	Ser	Cys	Lys	Lys	Pro	Glu	His	Glu	Leu	Phe	Leu	
		515					520					525				
Val	Tyr	Gly	Lys	Gly	Arg	Pro	Gly	Ile	Ile	Arg	Gly	Met	Asp	Met	Gly	
	530					535					540					
Ala	Lys	Val	Pro	Asp	Glu	His	Met	Ile	Pro	Ile	Glu	Asn	Leu	Met	Asn	
545					550					555					560	
Pro	Arg	Ala	Leu	Asp	Phe	His	Ala	Glu	Thr	Gly	Phe	Ile	Tyr	Phe	Ala	
				565					570					575		
Asp	Thr	Thr	Ser	Tyr	Leu	Ile	Gly	Arg	Gln	Lys	Ile	Asp	Gly	Thr	Glu	
			580					585					590			
Arg	Glu	Thr	Ile	Leu	Lys	Asp	Gly	Ile	His	Asn	Val	Glu	Gly	Val	Ala	
		595					600					605				
Val	Asp	Trp	Met	Gly	Asp	Asn	Leu	Tyr	Trp	Thr	Asp	Asp	Gly	Pro	Lys	
	610					615					620					
Lys	Thr	Ile	Ser	Val	Ala	Arg	Leu	Glu	Lys	Ala	Ala	Gln	Thr	Arg	Lys	
625					630					635					640	
Thr	Leu	Ile	Glu	Gly	Lys	Met	Thr	His	Pro	Arg	Ala	Ile	Val	Val	Asp	
				645					650					655		
Pro	Leu	Asn	Gly	Trp	Met	Tyr	Trp	Thr	Asp	Trp	Glu	Glu	Asp	Pro	Lys	
			660					665					670			
Asp	Ser	Arg	Arg	Gly	Arg	Leu	Glu	Arg	Ala	Trp	Met	Asp	Gly	Ser	His	
		675					680					685				
Arg	Asp	Ile	Phe	Val	Thr	Ser	Lys	Thr	Val	Leu	Trp	Pro	Asn	Gly	Leu	
	690					695					700					
Ser	Leu	Asp	Ile	Pro	Ala	Gly	Arg	Leu	Tyr	Trp	Val	Asp	Ala	Phe	Tyr	
705					710					715					720	

Asp	Arg	Ile	Glu	Thr	Ile	Leu	Leu	Asn	Gly	Thr	Asp	Arg	Lys	Ile	Val	725	730	735	
Tyr	Glu	Gly	Pro	Glu	Leu	Asn	His	Ala	Phe	Gly	Leu	Cys	His	His	Gly	740	745	750	
Asn	Tyr	Leu	Phe	Trp	Thr	Glu	Tyr	Arg	Ser	Gly	Ser	Val	Tyr	Arg	Leu	755	760	765	
Glu	Arg	Gly	Val	Gly	Gly	Ala	Pro	Pro	Thr	Val	Thr	Leu	Leu	Arg	Ser	770	775	780	
Glu	Arg	Pro	Pro	Ile	Phe	Glu	Ile	Arg	Met	Tyr	Asp	Ala	Gln	Gln	Gln	785	790	795	800
Gln	Val	Gly	Thr	Asn	Lys	Cys	Arg	Val	Asn	Asn	Gly	Gly	Cys	Ser	Ser	805	810	815	
Leu	Cys	Leu	Ala	Thr	Pro	Gly	Ser	Arg	Gln	Cys	Ala	Cys	Ala	Glu	Asp	820	825	830	
Gln	Val	Leu	Asp	Ala	Asp	Gly	Val	Thr	Cys	Leu	Ala	Asn	Pro	Ser	Tyr	835	840	845	
Val	Pro	Pro	Pro	Gln	Cys	Gln	Pro	Gly	Glu	Phe	Ala	Cys	Ala	Asn	Ser	850	855	860	
Arg	Cys	Ile	Gln	Glu	Arg	Trp	Lys	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Leu	865	870	875	880
Asp	Asn	Ser	Asp	Glu	Ala	Pro	Ala	Leu	Cys	His	Gln	His	Thr	Cys	Pro	885	890	895	
Ser	Asp	Arg	Phe	Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	Arg	Trp	900	905	910	
Leu	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu	Ser	Asn	915	920	925	
Ala	Thr	Cys	Ser	Ala	Arg	Thr	Cys	Pro	Pro	Asn	Gln	Phe	Ser	Cys	Ala	930	935	940	
Ser	Gly	Arg	Cys	Ile	Pro	Ile	Ser	Trp	Thr	Cys	Asp	Leu	Asp	Asp	Asp	945	950	955	960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys	965	970	975
Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile	980	985	990
Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu	995	1000	1005
Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn	1010	1015	1020
Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn	1025	1030	1035
Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn	1040	1045	1050
Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln	1055	1060	1065
Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp	1070	1075	1080
Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu	1085	1090	1095
Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys	1100	1105	1110
Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp	1115	1120	1125
Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu	1130	1135	1140
Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val	1145	1150	1155
Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly	1160	1165	1170
Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn	1175	1180	1185

Asn Gly	Gly Cys Ser His	Asn Cys Ser Val Ala Pro	Gly Glu Gly
1190		1195	1200
Ile Val	Cys Ser Cys Pro	Leu Gly Met Glu Leu Gly	Pro Asp Asn
1205		1210	1215
His Thr	Cys Gln Ile Gln	Ser Tyr Cys Ala Lys	His Leu Lys Cys
1220		1225	1230
Ser Gln	Lys Cys Asp Gln	Asn Lys Phe Ser Val	Lys Cys Ser Cys
1235		1240	1245
Tyr Glu	Gly Trp Val Leu	Glu Pro Asp Gly Glu	Ser Cys Arg Ser
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Leu Asp	Pro Phe Lys Pro	Phe Ile Ile Phe Ser	Asn Arg His Glu
1265		1270	1275
Ile Arg	Arg Ile Asp Leu	His Lys Gly Asp Tyr	Ser Val Leu Val
1280		1285	1290
Pro Gly	Leu Arg Asn Thr	Ile Ala Leu Asp Phe	His Leu Ser Gln
1295		1300	1305
Ser Ala	Leu Tyr Trp Thr	Asp Val Val Glu Asp	Lys Ile Tyr Arg
1310		1315	1320
Gly Lys	Leu Leu Asp Asn	Gly Ala Leu Thr Ser	Phe Glu Val Val
1325		1330	1335
Ile Gln	Tyr Gly Leu Ala	Thr Pro Glu Gly Leu	Ala Val Asp Trp
1340		1345	1350
Ile Ala	Gly Asn Ile Tyr	Trp Val Glu Ser Asn	Leu Asp Gln Ile
1355		1360	1365
Glu Val	Ala Lys Leu Asp	Gly Thr Leu Arg Thr	Thr Leu Leu Ala
1370		1375	1380
Gly Asp	Ile Glu His Pro	Arg Ala Ile Ala Leu	Asp Pro Arg Asp
1385		1390	1395
Gly Ile	Leu Phe Trp Thr	Asp Trp Asp Ala Ser	Leu Pro Arg Ile
1400		1405	1410

Glu	Ala	Ala	Ser	Met	Ser	Gly	Ala	Gly	Arg	Arg	Thr	Val	His	Arg
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Glu	Thr	Gly	Ser	Gly	Gly	Trp	Pro	Asn	Gly	Leu	Thr	Val	Asp	Tyr
1430						1435					1440			
Leu	Glu	Lys	Arg	Ile	Leu	Trp	Ile	Asp	Ala	Arg	Ser	Asp	Ala	Ile
1445						1450					1455			
Tyr	Ser	Ala	Arg	Tyr	Asp	Gly	Ser	Gly	His	Met	Glu	Val	Leu	Arg
1460						1465					1470			
Gly	His	Glu	Phe	Leu	Ser	His	Pro	Phe	Ala	Val	Thr	Leu	Tyr	Gly
1475						1480					1485			
Gly	Glu	Val	Tyr	Trp	Thr	Asp	Trp	Arg	Thr	Asn	Thr	Leu	Ala	Lys
1490						1495					1500			
Ala	Asn	Lys	Trp	Thr	Gly	His	Asn	Val	Thr	Val	Val	Gln	Arg	Thr
1505						1510					1515			
Asn	Thr	Gln	Pro	Phe	Asp	Leu	Gln	Val	Tyr	His	Pro	Ser	Arg	Gln
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Pro	Met	Ala	Pro	Asn	Pro	Cys	Glu	Ala	Asn	Gly	Gly	Gln	Gly	Pro
1535						1540					1545			
Cys	Ser	His	Leu	Cys	Leu	Ile	Asn	Tyr	Asn	Arg	Thr	Val	Ser	Cys
1550						1555					1560			
Ala	Cys	Pro	His	Leu	Met	Lys	Leu	His	Lys	Asp	Asn	Thr	Thr	Cys
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1580						1585					1590			
Arg	Gly	Val	Asp	Leu	Asp	Ala	Pro	Tyr	Tyr	Asn	Tyr	Ile	Ile	Ser
1595						1600					1605			
Phe	Thr	Val	Pro	Asp	Ile	Asp	Asn	Val	Thr	Val	Leu	Asp	Tyr	Asp
1610						1615					1620			
Ala	Arg	Glu	Gln	Arg	Val	Tyr	Trp	Ser	Asp	Val	Arg	Thr	Gln	Ala
1625						1630					1635			

Ile	Lys	Arg	Ala	Phe	Ile	Asn	Gly	Thr	Gly	Val	Glu	Thr	Val	Val
	1640					1645					1650			
Ser	Ala	Asp	Leu	Pro	Asn	Ala	His	Gly	Leu	Ala	Val	Asp	Trp	Val
	1655					1660					1665			
Ser	Arg	Asn	Leu	Phe	Trp	Thr	Ser	Tyr	Asp	Thr	Asn	Lys	Lys	Gln
	1670					1675					1680			
Ile	Asn	Val	Ala	Arg	Leu	Asp	Gly	Ser	Phe	Lys	Asn	Ala	Val	Val
	1685					1690					1695			
Gln	Gly	Leu	Glu	Gln	Pro	His	Gly	Leu	Val	Val	His	Pro	Leu	Arg
	1700					1705					1710			
Gly	Lys	Leu	Tyr	Trp	Thr	Asp	Gly	Asp	Asn	Ile	Ser	Met	Ala	Asn
	1715					1720					1725			
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	1730					1735					1740			
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Ser	Gly	Leu	Glu	Val	Ile	Asp	Ala	Met	Arg	Ser	Gln	Leu	Gly	Lys
	1775					1780					1785			
Ala	Thr	Ala	Leu	Ala	Ile	Met	Gly	Asp	Lys	Leu	Trp	Trp	Ala	Asp
	1790					1795					1800			
Gln	Val	Ser	Glu	Lys	Met	Gly	Thr	Cys	Ser	Lys	Ala	Asp	Gly	Ser
	1805					1810					1815			
Gly	Ser	Val	Val	Leu	Arg	Asn	Ser	Thr	Thr	Leu	Val	Met	His	Met
	1820					1825					1830			
Lys	Val	Tyr	Asp	Glu	Ser	Ile	Gln	Leu	Asp	His	Lys	Gly	Thr	Asn
	1835					1840					1845			
Pro	Cys	Ser	Val	Asn	Asn	Gly	Asp	Cys	Ser	Gln	Leu	Cys	Leu	Pro
	1850					1855					1860			

Thr	Ser	Glu	Thr	Thr	Arg	Ser	Cys	Met	Cys	Thr	Ala	Gly	Tyr	Ser
1865						1870					1875			
Leu	Arg	Ser	Gly	Gln	Gln	Ala	Cys	Glu	Gly	Val	Gly	Ser	Phe	Leu
1880						1885					1890			
Leu	Tyr	Ser	Val	His	Glu	Gly	Ile	Arg	Gly	Ile	Pro	Leu	Asp	Pro
1895						1900					1905			
Asn	Asp	Lys	Ser	Asp	Ala	Leu	Val	Pro	Val	Ser	Gly	Thr	Ser	Leu
1910						1915					1920			
Ala	Val	Gly	Ile	Asp	Phe	His	Ala	Glu	Asn	Asp	Thr	Ile	Tyr	Trp
1925						1930					1935			
Val	Asp	Met	Gly	Leu	Ser	Thr	Ile	Ser	Arg	Ala	Lys	Arg	Asp	Gln
1940						1945					1950			
Thr	Trp	Arg	Glu	Asp	Val	Val	Thr	Asn	Gly	Ile	Gly	Arg	Val	Glu
1955						1960					1965			
Gly	Ile	Ala	Val	Asp	Trp	Ile	Ala	Gly	Asn	Ile	Tyr	Trp	Thr	Asp
1970						1975					1980			
Gln	Gly	Phe	Asp	Val	Ile	Glu	Val	Ala	Arg	Leu	Asn	Gly	Ser	Phe
1985						1990					1995			
Arg	Tyr	Val	Val	Ile	Ser	Gln	Gly	Leu	Asp	Lys	Pro	Arg	Ala	Ile
2000						2005					2010			
Thr	Val	His	Pro	Glu	Lys	Gly	Tyr	Leu	Phe	Trp	Thr	Glu	Trp	Gly
2015						2020					2025			
Gln	Tyr	Pro	Arg	Ile	Glu	Arg	Ser	Arg	Leu	Asp	Gly	Thr	Glu	Arg
2030						2035					2040			
Val	Val	Leu	Val	Asn	Val	Ser	Ile	Ser	Trp	Pro	Asn	Gly	Ile	Ser
2045						2050					2055			
Val	Asp	Tyr	Gln	Asp	Gly	Lys	Leu	Tyr	Trp	Cys	Asp	Ala	Arg	Thr
2060						2065					2070			
Asp	Lys	Ile	Glu	Arg	Ile	Asp	Leu	Glu	Thr	Gly	Glu	Asn	Arg	Glu
2075						2080					2085			

Val	Val	Leu	Ser	Ser	Asn	Asn	Met	Asp	Met	Phe	Ser	Val	Ser	Val
2090						2095					2100			
Phe	Glu	Asp	Phe	Ile	Tyr	Trp	Ser	Asp	Arg	Thr	His	Ala	Asn	Gly
2105						2110					2115			
Ser	Ile	Lys	Arg	Gly	Ser	Lys	Asp	Asn	Ala	Thr	Asp	Ser	Val	Pro
2120						2125					2130			
Leu	Arg	Thr	Gly	Ile	Gly	Val	Gln	Leu	Lys	Asp	Ile	Lys	Val	Phe
2135						2140					2145			
Asn	Arg	Asp	Arg	Gln	Lys	Gly	Thr	Asn	Val	Cys	Ala	Val	Ala	Asn
2150						2155					2160			
Gly	Gly	Cys	Gln	Gln	Leu	Cys	Leu	Tyr	Arg	Gly	Arg	Gly	Gln	Arg
2165						2170					2175			
Ala	Cys	Ala	Cys	Ala	His	Gly	Met	Leu	Ala	Glu	Asp	Gly	Ala	Ser
2180						2185					2190			
Cys	Arg	Glu	Tyr	Ala	Gly	Tyr	Leu	Leu	Tyr	Ser	Glu	Arg	Thr	Ile
2195						2200					2205			
Leu	Lys	Ser	Ile	His	Leu	Ser	Asp	Glu	Arg	Asn	Leu	Asn	Ala	Pro
2210						2215					2220			
Val	Gln	Pro	Phe	Glu	Asp	Pro	Glu	His	Met	Lys	Asn	Val	Ile	Ala
2225						2230					2235			
Leu	Ala	Phe	Asp	Tyr	Arg	Ala	Gly	Thr	Ser	Pro	Gly	Thr	Pro	Asn
2240						2245					2250			
Arg	Ile	Phe	Phe	Ser	Asp	Ile	His	Phe	Gly	Asn	Ile	Gln	Gln	Ile
2255						2260					2265			
Asn	Asp	Asp	Gly	Ser	Arg	Arg	Ile	Thr	Ile	Val	Glu	Asn	Val	Gly
2270						2275					2280			
Ser	Val	Glu	Gly	Leu	Ala	Tyr	His	Arg	Gly	Trp	Asp	Thr	Leu	Tyr
2285						2290					2295			
Trp	Thr	Ser	Tyr	Thr	Thr	Ser	Thr	Ile	Thr	Arg	His	Thr	Val	Asp
2300						2305					2310			

Gln Thr	Arg Pro Gly Ala	Phe	Glu Arg Glu Thr	Val	Ile Thr Met
2315		2320		2325	
Ser Gly	Asp Asp His Pro	Arg	Ala Phe Val Leu	Asp	Glu Cys Gln
2330		2335		2340	
Asn Leu	Met Phe Trp Thr	Asn	Trp Asn Glu Gln	His	Pro Ser Ile
2345		2350		2355	
Met Arg	Ala Ala Leu Ser	Gly	Ala Asn Val Leu	Thr	Leu Ile Glu
2360		2365		2370	
Lys Asp	Ile Arg Thr Pro	Asn	Gly Leu Ala Ile	Asp	His Arg Ala
2375		2380		2385	
Glu Lys	Leu Tyr Phe Ser	Asp	Ala Thr Leu Asp	Lys	Ile Glu Arg
2390		2395		2400	
Cys Glu	Tyr Asp Gly Ser	His	Arg Tyr Val Ile	Leu	Lys Ser Glu
2405		2410		2415	
Pro Val	His Pro Phe Gly	Leu	Ala Val Tyr Gly	Glu	His Ile Phe
2420		2425		2430	
Trp Thr	Asp Trp Val Arg	Arg	Ala Val Gln Arg	Ala	Asn Lys His
2435		2440		2445	
Val Gly	Ser Asn Met Lys	Leu	Leu Arg Val Asp	Ile	Pro Gln Gln
2450		2455		2460	
Pro Met	Gly Ile Ile Ala	Val	Ala Asn Asp Thr	Asn	Ser Cys Glu
2465		2470		2475	
Leu Ser	Pro Cys Arg Ile	Asn	Asn Gly Gly Cys	Gln	Asp Leu Cys
2480		2485		2490	
Leu Leu	Thr His Gln Gly	His	Val Asn Cys Ser	Cys	Arg Gly Gly
2495		2500		2505	
Arg Ile	Leu Gln Asp Asp	Leu	Thr Cys Arg Ala	Val	Asn Ser Ser
2510		2515		2520	
Cys Arg	Ala Gln Asp Glu	Phe	Glu Cys Ala Asn	Gly	Glu Cys Ile
2525		2530		2535	

Asn	Phe	Ser	Leu	Thr	Cys	Asp	Gly	Val	Pro	His	Cys	Lys	Asp	Lys
2540						2545					2550			
Ser	Asp	Glu	Lys	Pro	Ser	Tyr	Cys	Asn	Ser	Arg	Arg	Cys	Lys	Lys
2555						2560					2565			
Thr	Phe	Arg	Gln	Cys	Ser	Asn	Gly	Arg	Cys	Val	Ser	Asn	Met	Leu
2570						2575					2580			
Trp	Cys	Asn	Gly	Ala	Asp	Asp	Cys	Gly	Asp	Gly	Ser	Asp	Glu	Ile
2585						2590					2595			
Pro	Cys	Asn	Lys	Thr	Ala	Cys	Gly	Val	Gly	Glu	Phe	Arg	Cys	Arg
2600						2605					2610			
Asp	Gly	Thr	Cys	Ile	Gly	Asn	Ser	Ser	Arg	Cys	Asn	Gln	Phe	Val
2615						2620					2625			
Asp	Cys	Glu	Asp	Ala	Ser	Asp	Glu	Met	Asn	Cys	Ser	Ala	Thr	Asp
2630						2635					2640			
Cys	Ser	Ser	Tyr	Phe	Arg	Leu	Gly	Val	Lys	Gly	Val	Leu	Phe	Gln
2645						2650					2655			
Pro	Cys	Glu	Arg	Thr	Ser	Leu	Cys	Tyr	Ala	Pro	Ser	Trp	Val	Cys
2660						2665					2670			
Asp	Gly	Ala	Asn	Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Arg	Asp	Cys
2675						2680					2685			
Pro	Gly	Val	Lys	Arg	Pro	Arg	Cys	Pro	Leu	Asn	Tyr	Phe	Ala	Cys
2690						2695					2700			
Pro	Ser	Gly	Arg	Cys	Ile	Pro	Met	Ser	Trp	Thr	Cys	Asp	Lys	Glu
2705						2710					2715			
Asp	Asp	Cys	Glu	His	Gly	Glu	Asp	Glu	Thr	His	Cys	Asn	Lys	Phe
2720						2725					2730			
Cys	Ser	Glu	Ala	Gln	Phe	Glu	Cys	Gln	Asn	His	Arg	Cys	Ile	Ser
2735						2740					2745			
Lys	Gln	Trp	Leu	Cys	Asp	Gly	Ser	Asp	Asp	Cys	Gly	Asp	Gly	Ser
2750						2755					2760			

Asp	Glu	Ala	Ala	His	Cys	Glu	Gly	Lys	Thr	Cys	Gly	Pro	Ser	Ser
2765						2770					2775			
Phe	Ser	Cys	Pro	Gly	Thr	His	Val	Cys	Val	Pro	Glu	Arg	Trp	Leu
2780						2785					2790			
Cys	Asp	Gly	Asp	Lys	Asp	Cys	Ala	Asp	Gly	Ala	Asp	Glu	Ser	Ile
2795						2800					2805			
Ala	Ala	Gly	Cys	Leu	Tyr	Asn	Ser	Thr	Cys	Asp	Asp	Arg	Glu	Phe
2810						2815					2820			
Met	Cys	Gln	Asn	Arg	Gln	Cys	Ile	Pro	Lys	His	Phe	Val	Cys	Asp
2825						2830					2835			
His	Asp	Arg	Asp	Cys	Ala	Asp	Gly	Ser	Asp	Glu	Ser	Pro	Glu	Cys
2840						2845					2850			
Glu	Tyr	Pro	Thr	Cys	Gly	Pro	Ser	Glu	Phe	Arg	Cys	Ala	Asn	Gly
2855						2860					2865			
Arg	Cys	Leu	Ser	Ser	Arg	Gln	Trp	Glu	Cys	Asp	Gly	Glu	Asn	Asp
2870						2875					2880			
Cys	His	Asp	Gln	Ser	Asp	Glu	Ala	Pro	Lys	Asn	Pro	His	Cys	Thr
2885						2890					2895			
Ser	Pro	Glu	His	Lys	Cys	Asn	Ala	Ser	Ser	Gln	Phe	Leu	Cys	Ser
2900						2905					2910			
Ser	Gly	Arg	Cys	Val	Ala	Glu	Ala	Leu	Leu	Cys	Asn	Gly	Gln	Asp
2915						2920					2925			
Asp	Cys	Gly	Asp	Ser	Ser	Asp	Glu	Arg	Gly	Cys	His	Ile	Asn	Glu
2930						2935					2940			
Cys	Leu	Ser	Arg	Lys	Leu	Ser	Gly	Cys	Ser	Gln	Asp	Cys	Glu	Asp
2945						2950					2955			
Leu	Lys	Ile	Gly	Phe	Lys	Cys	Arg	Cys	Arg	Pro	Gly	Phe	Arg	Leu
2960						2965					2970			
Lys	Asp	Asp	Gly	Arg	Thr	Cys	Ala	Asp	Val	Asp	Glu	Cys	Ser	Thr
2975						2980					2985			

Thr	Phe	Pro	Cys	Ser	Gln	Arg	Cys	Ile	Asn	Thr	His	Gly	Ser	Tyr	2990		2995		3000
Lys	Cys	Leu	Cys	Val	Glu	Gly	Tyr	Ala	Pro	Arg	Gly	Gly	Asp	Pro	3005		3010		3015
His	Ser	Cys	Lys	Ala	Val	Thr	Asp	Glu	Glu	Pro	Phe	Leu	Ile	Phe	3020		3025		3030
Ala	Asn	Arg	Tyr	Tyr	Leu	Arg	Lys	Leu	Asn	Leu	Asp	Gly	Ser	Asn	3035		3040		3045
Tyr	Thr	Leu	Leu	Lys	Gln	Gly	Leu	Asn	Asn	Ala	Val	Ala	Leu	Asp	3050		3055		3060
Phe	Asp	Tyr	Arg	Glu	Gln	Met	Ile	Tyr	Trp	Thr	Asp	Val	Thr	Thr	3065		3070		3075
Gln	Gly	Ser	Met	Ile	Arg	Arg	Met	His	Leu	Asn	Gly	Ser	Asn	Val	3080		3085		3090
Gln	Val	Leu	His	Arg	Thr	Gly	Leu	Ser	Asn	Pro	Asp	Gly	Leu	Ala	3095		3100		3105
Val	Asp	Trp	Val	Gly	Gly	Asn	Leu	Tyr	Trp	Cys	Asp	Lys	Gly	Arg	3110		3115		3120
Asp	Thr	Ile	Glu	Val	Ser	Lys	Leu	Asn	Gly	Ala	Tyr	Arg	Thr	Val	3125		3130		3135
Leu	Val	Ser	Ser	Gly	Leu	Arg	Glu	Pro	Arg	Ala	Leu	Val	Val	Asp	3140		3145		3150
Val	Gln	Asn	Gly	Tyr	Leu	Tyr	Trp	Thr	Asp	Trp	Gly	Asp	His	Ser	3155		3160		3165
Leu	Ile	Gly	Arg	Ile	Gly	Met	Asp	Gly	Ser	Ser	Arg	Ser	Val	Ile	3170		3175		3180
Val	Asp	Thr	Lys	Ile	Thr	Trp	Pro	Asn	Gly	Leu	Thr	Leu	Asp	Tyr	3185		3190		3195
Val	Thr	Glu	Arg	Ile	Tyr	Trp	Ala	Asp	Ala	Arg	Glu	Asp	Tyr	Ile	3200		3205		3210

Glu	Phe	Ala	Ser	Leu	Asp	Gly	Ser	Asn	Arg	His	Val	Val	Leu	Ser
3215						3220					3225			
Gln	Asp	Ile	Pro	His	Ile	Phe	Ala	Leu	Thr	Leu	Phe	Glu	Asp	Tyr
3230						3235					3240			
Val	Tyr	Trp	Thr	Asp	Trp	Glu	Thr	Lys	Ser	Ile	Asn	Arg	Ala	His
3245						3250					3255			
Lys	Thr	Thr	Gly	Thr	Asn	Lys	Thr	Leu	Leu	Ile	Ser	Thr	Leu	His
3260						3265					3270			
Arg	Pro	Met	Asp	Leu	His	Val	Phe	His	Ala	Leu	Arg	Gln	Pro	Asp
3275						3280					3285			
Val	Pro	Asn	His	Pro	Cys	Lys	Val	Asn	Asn	Gly	Gly	Cys	Ser	Asn
3290						3295					3300			
Leu	Cys	Leu	Leu	Ser	Pro	Gly	Gly	Gly	His	Lys	Cys	Ala	Cys	Pro
3305						3310					3315			
Thr	Asn	Phe	Tyr	Leu	Gly	Ser	Asp	Gly	Arg	Thr	Cys	Val	Ser	Asn
3320						3325					3330			
Cys	Thr	Ala	Ser	Gln	Phe	Val	Cys	Lys	Asn	Asp	Lys	Cys	Ile	Pro
3335						3340					3345			
Phe	Trp	Trp	Lys	Cys	Asp	Thr	Glu	Asp	Asp	Cys	Gly	Asp	His	Ser
3350						3355					3360			
Asp	Glu	Pro	Pro	Asp	Cys	Pro	Glu	Phe	Lys	Cys	Arg	Pro	Gly	Gln
3365						3370					3375			
Phe	Gln	Cys	Ser	Thr	Gly	Ile	Cys	Thr	Asn	Pro	Ala	Phe	Ile	Cys
3380						3385					3390			
Asp	Gly	Asp	Asn	Asp	Cys	Gln	Asp	Asn	Ser	Asp	Glu	Ala	Asn	Cys
3395						3400					3405			
Asp	Ile	His	Val	Cys	Leu	Pro	Ser	Gln	Phe	Lys	Cys	Thr	Asn	Thr
3410						3415					3420			
Asn	Arg	Cys	Ile	Pro	Gly	Ile	Phe	Arg	Cys	Asn	Gly	Gln	Asp	Asn
3425						3430					3435			

Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys	3440	3445	3450
Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro	3455	3460	3465
Arg Val Trp Val Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser	3470	3475	3480
Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu	3485	3490	3495
Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys	3500	3505	3510
Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys	3515	3520	3525
Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys	3530	3535	3540
Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp	3545	3550	3555
Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg	3560	3565	3570
Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys Ile	3575	3580	3585
Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys Ala Asp Gly	3590	3595	3600
Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp Gln Phe	3605	3610	3615
Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys Asp	3620	3625	3630
Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly	3635	3640	3645
Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn	3650	3655	3660

Thr	Leu	Cys	Lys	Pro	Leu	Ala	Trp	Lys	Cys	Asp	Gly	Glu	Asp	Asp
3665						3670					3675			
Cys	Gly	Asp	Asn	Ser	Asp	Glu	Asn	Pro	Glu	Glu	Cys	Ala	Arg	Phe
3680						3685					3690			
Val	Cys	Pro	Pro	Asn	Arg	Pro	Phe	Arg	Cys	Lys	Asn	Asp	Arg	Val
3695						3700					3705			
Cys	Leu	Trp	Ile	Gly	Arg	Gln	Cys	Asp	Gly	Thr	Asp	Asn	Cys	Gly
3710						3715					3720			
Asp	Gly	Thr	Asp	Glu	Glu	Asp	Cys	Glu	Pro	Pro	Thr	Ala	His	Thr
3725						3730					3735			
Thr	His	Cys	Lys	Asp	Lys	Lys	Glu	Phe	Leu	Cys	Arg	Asn	Gln	Arg
3740						3745					3750			
Cys	Leu	Ser	Ser	Ser	Leu	Arg	Cys	Asn	Met	Phe	Asp	Asp	Cys	Gly
3755						3760					3765			
Asp	Gly	Ser	Asp	Glu	Glu	Asp	Cys	Ser	Ile	Asp	Pro	Lys	Leu	Thr
3770						3775					3780			
Ser	Cys	Ala	Thr	Asn	Ala	Ser	Ile	Cys	Gly	Asp	Glu	Ala	Arg	Cys
3785						3790					3795			
Val	Arg	Thr	Glu	Lys	Ala	Ala	Tyr	Cys	Ala	Cys	Arg	Ser	Gly	Phe
3800						3805					3810			
His	Thr	Val	Pro	Gly	Gln	Pro	Gly	Cys	Gln	Asp	Ile	Asn	Glu	Cys
3815						3820					3825			
Leu	Arg	Phe	Gly	Thr	Cys	Ser	Gln	Leu	Cys	Asn	Asn	Thr	Lys	Gly
3830						3835					3840			
Gly	His	Leu	Cys	Ser	Cys	Ala	Arg	Asn	Phe	Met	Lys	Thr	His	Asn
3845						3850					3855			
Thr	Cys	Lys	Ala	Glu	Gly	Ser	Glu	Tyr	Gln	Val	Leu	Tyr	Ile	Ala
3860						3865					3870			
Asp	Asp	Asn	Glu	Ile	Arg	Ser	Leu	Phe	Pro	Gly	His	Pro	His	Ser
3875						3880					3885			

Ala	Tyr	Glu	Gln	Ala	Phe	Gln	Gly	Asp	Glu	Ser	Val	Arg	Ile	Asp
3890						3895					3900			
Ala	Met	Asp	Val	His	Val	Lys	Ala	Gly	Arg	Val	Tyr	Trp	Thr	Asn
3905						3910					3915			
Trp	His	Thr	Gly	Thr	Ile	Ser	Tyr	Arg	Ser	Leu	Pro	Pro	Ala	Ala
3920						3925					3930			
Pro	Pro	Thr	Thr	Ser	Asn	Arg	His	Arg	Arg	Gln	Ile	Asp	Arg	Gly
3935						3940					3945			
Val	Thr	His	Leu	Asn	Ile	Ser	Gly	Leu	Lys	Met	Pro	Arg	Gly	Ile
3950						3955					3960			
Ala	Ile	Asp	Trp	Val	Ala	Gly	Asn	Val	Tyr	Trp	Thr	Asp	Ser	Gly
3965						3970					3975			
Arg	Asp	Val	Ile	Glu	Val	Ala	Gln	Met	Lys	Gly	Glu	Asn	Arg	Lys
3980						3985					3990			
Thr	Leu	Ile	Ser	Gly	Met	Ile	Asp	Glu	Pro	His	Ala	Ile	Val	Val
3995						4000					4005			
Asp	Pro	Leu	Arg	Gly	Thr	Met	Tyr	Trp	Ser	Asp	Trp	Gly	Asn	His
4010						4015					4020			
Pro	Lys	Ile	Glu	Thr	Ala	Ala	Met	Asp	Gly	Thr	Leu	Arg	Glu	Thr
4025						4030					4035			
Leu	Val	Gln	Asp	Asn	Ile	Gln	Trp	Pro	Thr	Gly	Leu	Ala	Val	Asp
4040						4045					4050			
Tyr	His	Asn	Glu	Arg	Leu	Tyr	Trp	Ala	Asp	Ala	Lys	Leu	Ser	Val
4055						4060					4065			
Ile	Gly	Ser	Ile	Arg	Leu	Asn	Gly	Thr	Asp	Pro	Ile	Val	Ala	Ala
4070						4075					4080			
Asp	Ser	Lys	Arg	Gly	Leu	Ser	His	Pro	Phe	Ser	Ile	Asp	Val	Phe
4085						4090					4095			
Glu	Asp	Tyr	Ile	Tyr	Gly	Val	Thr	Tyr	Ile	Asn	Asn	Arg	Val	Phe
4100						4105					4110			

Lys	Ile	His	Lys	Phe	Gly	His	Ser	Pro	Leu	Val	Asn	Leu	Thr	Gly
4115						4120					4125			
Gly	Leu	Ser	His	Ala	Ser	Asp	Val	Val	Leu	Tyr	His	Gln	His	Lys
4130						4135					4140			
Gln	Pro	Glu	Val	Thr	Asn	Pro	Cys	Asp	Arg	Lys	Lys	Cys	Glu	Trp
4145						4150					4155			
Leu	Cys	Leu	Leu	Ser	Pro	Ser	Gly	Pro	Val	Cys	Thr	Cys	Pro	Asn
4160						4165					4170			
Gly	Lys	Arg	Leu	Asp	Asn	Gly	Thr	Cys	Val	Pro	Val	Pro	Ser	Pro
4175						4180					4185			
Thr	Pro	Pro	Pro	Asp	Ala	Pro	Arg	Pro	Gly	Thr	Cys	Asn	Leu	Gln
4190						4195					4200			
Cys	Phe	Asn	Gly	Gly	Ser	Cys	Phe	Leu	Asn	Ala	Arg	Arg	Gln	Pro
4205						4210					4215			
Lys	Cys	Arg	Cys	Gln	Pro	Arg	Tyr	Thr	Gly	Asp	Lys	Cys	Glu	Leu
4220						4225					4230			
Asp	Gln	Cys	Trp	Glu	His	Cys	Arg	Asn	Gly	Gly	Thr	Cys	Ala	Ala
4235						4240					4245			
Ser	Pro	Ser	Gly	Met	Pro	Thr	Cys	Arg	Cys	Pro	Thr	Gly	Phe	Thr
4250						4255					4260			
Gly	Pro	Lys	Cys	Thr	Gln	Gln	Val	Cys	Ala	Gly	Tyr	Cys	Ala	Asn
4265						4270					4275			
Asn	Ser	Thr	Cys	Thr	Val	Asn	Gln	Gly	Asn	Gln	Pro	Gln	Cys	Arg
4280						4285					4290			
Cys	Leu	Pro	Gly	Phe	Leu	Gly	Asp	Arg	Cys	Gln	Tyr	Arg	Gln	Cys
4295						4300					4305			
Ser	Gly	Tyr	Cys	Glu	Asn	Phe	Gly	Thr	Cys	Gln	Met	Ala	Ala	Asp
4310						4315					4320			
Gly	Ser	Arg	Gln	Cys	Arg	Cys	Thr	Ala	Tyr	Phe	Glu	Gly	Ser	Arg
4325						4330					4335			

Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
 4340 4345 4350

Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
 4355 4360 4365

Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn
 4370 4375 4380

Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln
 4385 4390 4395

Cys Pro Pro His Met Thr Gly Pro Arg Cys Glu Glu His Val Phe
 4400 4405 4410

Ser Gln Gln Gln Pro Gly
 4415

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 <211> 4464
 <212> PRT
 <213> H. sapiens

<400> 10

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
 1 5 10 15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
 20 25 30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
 35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
 85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
 340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
 355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
 500 505 510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
 515 520 525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
 530 535 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
 545 550 555 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
 565 570 575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625 630 635 640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
725 730 735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
805 810 815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
 850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
 865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
 885 890 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
 900 905 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
 915 920 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
 930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
 945 950 955 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
 965 970 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
 980 985 990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
 995 1000 1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
 1010 1015 1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
 1025 1030 1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
 1040 1045 1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
 1055 1060 1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
 1070 1075 1080

Gly	Asp	Thr	Asp	Cys	Met	Asp	Ser	Ser	Asp	Glu	Lys	Ser	Cys	Glu
1085						1090					1095			
Gly	Val	Thr	His	Val	Cys	Asp	Pro	Ser	Val	Lys	Phe	Gly	Cys	Lys
1100						1105					1110			
Asp	Ser	Ala	Arg	Cys	Ile	Ser	Lys	Ala	Trp	Val	Cys	Asp	Gly	Asp
1115						1120					1125			
Asn	Asp	Cys	Glu	Asp	Asn	Ser	Asp	Glu	Glu	Asn	Cys	Glu	Ser	Leu
1130						1135					1140			
Ala	Cys	Arg	Pro	Pro	Ser	His	Pro	Cys	Ala	Asn	Asn	Thr	Ser	Val
1145						1150					1155			
Cys	Leu	Pro	Pro	Asp	Lys	Leu	Cys	Asp	Gly	Asn	Asp	Asp	Cys	Gly
1160						1165					1170			
Asp	Gly	Ser	Asp	Glu	Gly	Glu	Leu	Cys	Asp	Gln	Cys	Ser	Leu	Asn
1175						1180					1185			
Asn	Gly	Gly	Cys	Ser	His	Asn	Cys	Ser	Val	Ala	Pro	Gly	Glu	Gly
1190						1195					1200			
Ile	Val	Cys	Ser	Cys	Pro	Leu	Gly	Met	Glu	Leu	Gly	Pro	Asp	Asn
1205						1210					1215			
His	Thr	Cys	Gln	Ile	Gln	Ser	Tyr	Cys	Ala	Lys	His	Leu	Lys	Cys
1220						1225					1230			
Ser	Gln	Lys	Cys	Asp	Gln	Asn	Lys	Phe	Ser	Val	Lys	Cys	Ser	Cys
1235						1240					1245			
Tyr	Glu	Gly	Trp	Val	Leu	Glu	Pro	Asp	Gly	Glu	Ser	Cys	Arg	Ser
1250						1255					1260			
Leu	Asp	Pro	Phe	Lys	Pro	Phe	Ile	Ile	Phe	Ser	Asn	Arg	His	Glu
1265						1270					1275			
Ile	Arg	Arg	Ile	Asp	Leu	His	Lys	Gly	Asp	Tyr	Ser	Val	Leu	Val
1280						1285					1290			
Pro	Gly	Leu	Arg	Asn	Thr	Ile	Ala	Leu	Asp	Phe	His	Leu	Ser	Gln
1295						1300					1305			

Ser	Ala	Leu	Tyr	Trp	Thr	Asp	Val	Val	Glu	Asp	Lys	Ile	Tyr	Arg
1310						1315					1320			
Gly	Lys	Leu	Leu	Asp	Asn	Gly	Ala	Leu	Thr	Ser	Phe	Glu	Val	Val
1325						1330					1335			
Ile	Gln	Tyr	Gly	Leu	Ala	Thr	Pro	Glu	Gly	Leu	Ala	Val	Asp	Trp
1340						1345					1350			
Ile	Ala	Gly	Asn	Ile	Tyr	Trp	Val	Glu	Ser	Asn	Leu	Asp	Gln	Ile
1355						1360					1365			
Glu	Val	Ala	Lys	Leu	Asp	Gly	Thr	Leu	Arg	Thr	Thr	Leu	Leu	Ala
1370						1375					1380			
Gly	Asp	Ile	Glu	His	Pro	Arg	Ala	Ile	Ala	Leu	Asp	Pro	Arg	Asp
1385						1390					1395			
Gly	Ile	Leu	Phe	Trp	Thr	Asp	Trp	Asp	Ala	Ser	Leu	Pro	Arg	Ile
1400						1405					1410			
Glu	Ala	Ala	Ser	Met	Ser	Gly	Ala	Gly	Arg	Arg	Thr	Val	His	Arg
1415						1420					1425			
Glu	Thr	Gly	Ser	Gly	Gly	Trp	Pro	Asn	Gly	Leu	Thr	Val	Asp	Tyr
1430						1435					1440			
Leu	Glu	Lys	Arg	Ile	Leu	Trp	Ile	Asp	Ala	Arg	Ser	Asp	Ala	Ile
1445						1450					1455			
Tyr	Ser	Ala	Arg	Tyr	Asp	Gly	Ser	Gly	His	Met	Glu	Val	Leu	Arg
1460						1465					1470			
Gly	His	Glu	Phe	Leu	Ser	His	Pro	Phe	Ala	Val	Thr	Leu	Tyr	Gly
1475						1480					1485			
Gly	Glu	Val	Tyr	Trp	Thr	Asp	Trp	Arg	Thr	Asn	Thr	Leu	Ala	Lys
1490						1495					1500			
Ala	Asn	Lys	Trp	Thr	Gly	His	Asn	Val	Thr	Val	Val	Gln	Arg	Thr
1505						1510					1515			
Asn	Thr	Gln	Pro	Phe	Asp	Leu	Gln	Val	Tyr	His	Pro	Ser	Arg	Gln
1520						1525					1530			

Pro Met	Ala	Pro	Asn	Pro	Cys	Glu	Ala	Asn	Gly	Gly	Gln	Gly	Pro
1535					1540					1545			
Cys Ser	His	Leu	Cys	Leu	Ile	Asn	Tyr	Asn	Arg	Thr	Val	Ser	Cys
1550					1555					1560			
Ala Cys	Pro	His	Leu	Met	Lys	Leu	His	Lys	Asp	Asn	Thr	Thr	Cys
1565					1570					1575			
Tyr Glu	Phe	Lys	Lys	Phe	Leu	Leu	Tyr	Ala	Arg	Gln	Met	Glu	Ile
1580					1585					1590			
Arg Gly	Val	Asp	Leu	Asp	Ala	Pro	Tyr	Tyr	Asn	Tyr	Ile	Ile	Ser
1595					1600					1605			
Phe Thr	Val	Pro	Asp	Ile	Asp	Asn	Val	Thr	Val	Leu	Asp	Tyr	Asp
1610					1615					1620			
Ala Arg	Glu	Gln	Arg	Val	Tyr	Trp	Ser	Asp	Val	Arg	Thr	Gln	Ala
1625					1630					1635			
Ile Lys	Arg	Ala	Phe	Ile	Asn	Gly	Thr	Gly	Val	Glu	Thr	Val	Val
1640					1645					1650			
Ser Ala	Asp	Leu	Pro	Asn	Ala	His	Gly	Leu	Ala	Val	Asp	Trp	Val
1655					1660					1665			
Ser Arg	Asn	Leu	Phe	Trp	Thr	Ser	Tyr	Asp	Thr	Asn	Lys	Lys	Gln
1670					1675					1680			
Ile Asn	Val	Ala	Arg	Leu	Asp	Gly	Ser	Phe	Lys	Asn	Ala	Val	Val
1685					1690					1695			
Gln Gly	Leu	Glu	Gln	Pro	His	Gly	Leu	Val	Val	His	Pro	Leu	Arg
1700					1705					1710			
Gly Lys	Leu	Tyr	Trp	Thr	Asp	Gly	Asp	Asn	Ile	Ser	Met	Ala	Asn
1715					1720					1725			
Met Asp	Gly	Ser	Asn	Arg	Thr	Leu	Leu	Phe	Ser	Gly	Gln	Lys	Gly
1730					1735					1740			
Pro Val	Gly	Leu	Ala	Ile	Asp	Phe	Pro	Glu	Ser	Lys	Leu	Tyr	Trp
1745					1750					1755			

Ile Ser Ser Gly Asn His Thr	Ile Asn Arg Cys Asn	Leu Asp Gly
1760	1765	1770
Ser Gly Leu Glu Val Ile Asp	Ala Met Arg Ser Gln	Leu Gly Lys
1775	1780	1785
Ala Thr Ala Leu Ala Ile Met	Gly Asp Lys Leu Trp	Trp Ala Asp
1790	1795	1800
Gln Val Ser Glu Lys Met Gly	Thr Cys Ser Lys Ala	Asp Gly Ser
1805	1810	1815
Gly Ser Val Val Leu Arg Asn	Ser Thr Thr Leu Val	Met His Met
1820	1825	1830
Lys Val Tyr Asp Glu Ser Ile	Gln Leu Asp His Lys	Gly Thr Asn
1835	1840	1845
Pro Cys Ser Val Asn Asn Gly	Asp Cys Ser Gln Leu	Cys Leu Pro
1850	1855	1860
Thr Ser Glu Thr Thr Arg Ser	Cys Met Cys Thr Ala	Gly Tyr Ser
1865	1870	1875
Leu Arg Ser Gly Gln Gln Ala	Cys Glu Gly Val Gly	Ser Phe Leu
1880	1885	1890
Leu Tyr Ser Val His Glu Gly	Ile Arg Gly Ile Pro	Leu Asp Pro
1895	1900	1905
Asn Asp Lys Ser Asp Ala Leu	Val Pro Val Ser Gly	Thr Ser Leu
1910	1915	1920
Ala Val Gly Ile Asp Phe His	Ala Glu Asn Asp Thr	Ile Tyr Trp
1925	1930	1935
Val Asp Met Gly Leu Ser Thr	Ile Ser Arg Ala Lys	Arg Asp Gln
1940	1945	1950
Thr Trp Arg Glu Asp Val Val	Thr Asn Gly Ile Gly	Arg Val Glu
1955	1960	1965
Gly Ile Ala Val Asp Trp Ile	Ala Gly Asn Ile Tyr	Trp Thr Asp
1970	1975	1980

Gln Gly	Phe Asp Val Ile	Glu Val Ala Arg Leu	Asn Gly Ser Phe
1985		1990	1995
Arg Tyr	Val Val Ile Ser	Gln Gly Leu Asp Lys	Pro Arg Ala Ile
2000		2005	2010
Thr Val	His Pro Glu Lys	Gly Tyr Leu Phe Trp	Thr Glu Trp Gly
2015		2020	2025
Gln Tyr	Pro Arg Ile Glu	Arg Ser Arg Leu Asp	Gly Thr Glu Arg
2030		2035	2040
Val Val	Leu Val Asn Val	Ser Ile Ser Trp Pro	Asn Gly Ile Ser
2045		2050	2055
Val Asp	Tyr Gln Asp Gly	Lys Leu Tyr Trp Cys	Asp Ala Arg Thr
2060		2065	2070
Asp Lys	Ile Glu Arg Ile	Asp Leu Glu Thr Gly	Glu Asn Arg Glu
2075		2080	2085
Val Val	Leu Ser Ser Asn	Asn Met Asp Met Phe	Ser Val Ser Val
2090		2095	2100
Phe Glu	Asp Phe Ile Tyr	Trp Ser Asp Arg Thr	His Ala Asn Gly
2105		2110	2115
Ser Ile	Lys Arg Gly Ser	Lys Asp Asn Ala Thr	Asp Ser Val Pro
2120		2125	2130
Leu Arg	Thr Gly Ile Gly	Val Gln Leu Lys Asp	Ile Lys Val Phe
2135		2140	2145
Asn Arg	Asp Arg Gln Lys	Gly Thr Asn Val Cys	Ala Val Ala Asn
2150		2155	2160
Gly Gly	Cys Gln Gln Leu	Cys Leu Tyr Arg Gly	Arg Gly Gln Arg
2165		2170	2175
Ala Cys	Ala Cys Ala His	Gly Met Leu Ala Glu	Asp Gly Ala Ser
2180		2185	2190
Cys Arg	Glu Tyr Ala Gly	Tyr Leu Leu Tyr Ser	Glu Arg Thr Ile
2195		2200	2205

Leu	Lys	Ser	Ile	His	Leu	Ser	Asp	Glu	Arg	Asn	Leu	Asn	Ala	Pro
2210						2215					2220			
Val	Gln	Pro	Phe	Glu	Asp	Pro	Glu	His	Met	Lys	Asn	Val	Ile	Ala
2225						2230					2235			
Leu	Ala	Phe	Asp	Tyr	Arg	Ala	Gly	Thr	Ser	Pro	Gly	Thr	Pro	Asn
2240						2245					2250			
Arg	Ile	Phe	Phe	Ser	Asp	Ile	His	Phe	Gly	Asn	Ile	Gln	Gln	Ile
2255						2260					2265			
Asn	Asp	Asp	Gly	Ser	Arg	Arg	Ile	Thr	Ile	Val	Glu	Asn	Val	Gly
2270						2275					2280			
Ser	Val	Glu	Gly	Leu	Ala	Tyr	His	Arg	Gly	Trp	Asp	Thr	Leu	Tyr
2285						2290					2295			
Trp	Thr	Ser	Tyr	Thr	Thr	Ser	Thr	Ile	Thr	Arg	His	Thr	Val	Asp
2300						2305					2310			
Gln	Thr	Arg	Pro	Gly	Ala	Phe	Glu	Arg	Glu	Thr	Val	Ile	Thr	Met
2315						2320					2325			
Ser	Gly	Asp	Asp	His	Pro	Arg	Ala	Phe	Val	Leu	Asp	Glu	Cys	Gln
2330						2335					2340			
Asn	Leu	Met	Phe	Trp	Thr	Asn	Trp	Asn	Glu	Gln	His	Pro	Ser	Ile
2345						2350					2355			
Met	Arg	Ala	Ala	Leu	Ser	Gly	Ala	Asn	Val	Leu	Thr	Leu	Ile	Glu
2360						2365					2370			
Lys	Asp	Ile	Arg	Thr	Pro	Asn	Gly	Leu	Ala	Ile	Asp	His	Arg	Ala
2375						2380					2385			
Glu	Lys	Leu	Tyr	Phe	Ser	Asp	Ala	Thr	Leu	Asp	Lys	Ile	Glu	Arg
2390						2395					2400			
Cys	Glu	Tyr	Asp	Gly	Ser	His	Arg	Tyr	Val	Ile	Leu	Lys	Ser	Glu
2405						2410					2415			
Pro	Val	His	Pro	Phe	Gly	Leu	Ala	Val	Tyr	Gly	Glu	His	Ile	Phe
2420						2425					2430			

Trp	Thr	Asp	Trp	Val	Arg	Arg	Ala	Val	Gln	Arg	Ala	Asn	Lys	His
2435						2440					2445			
Val	Gly	Ser	Asn	Met	Lys	Leu	Leu	Arg	Val	Asp	Ile	Pro	Gln	Gln
2450						2455					2460			
Pro	Met	Gly	Ile	Ile	Ala	Val	Ala	Asn	Asp	Thr	Asn	Ser	Cys	Glu
2465						2470					2475			
Leu	Ser	Pro	Cys	Arg	Ile	Asn	Asn	Gly	Gly	Cys	Gln	Asp	Leu	Cys
2480						2485					2490			
Leu	Leu	Thr	His	Gln	Gly	His	Val	Asn	Cys	Ser	Cys	Arg	Gly	Gly
2495						2500					2505			
Arg	Ile	Leu	Gln	Asp	Asp	Leu	Thr	Cys	Arg	Ala	Val	Asn	Ser	Ser
2510						2515					2520			
Cys	Arg	Ala	Gln	Asp	Glu	Phe	Glu	Cys	Ala	Asn	Gly	Glu	Cys	Ile
2525						2530					2535			
Asn	Phe	Ser	Leu	Thr	Cys	Asp	Gly	Val	Pro	His	Cys	Lys	Asp	Lys
2540						2545					2550			
Ser	Asp	Glu	Lys	Pro	Ser	Tyr	Cys	Asn	Ser	Arg	Arg	Cys	Lys	Lys
2555						2560					2565			
Thr	Phe	Arg	Gln	Cys	Ser	Asn	Gly	Arg	Cys	Val	Ser	Asn	Met	Leu
2570						2575					2580			
Trp	Cys	Asn	Gly	Ala	Asp	Asp	Cys	Gly	Asp	Gly	Ser	Asp	Glu	Ile
2585						2590					2595			
Pro	Cys	Asn	Lys	Thr	Ala	Cys	Gly	Val	Gly	Glu	Phe	Arg	Cys	Arg
2600						2605					2610			
Asp	Gly	Thr	Cys	Ile	Gly	Asn	Ser	Ser	Arg	Cys	Asn	Gln	Phe	Val
2615						2620					2625			
Asp	Cys	Glu	Asp	Ala	Ser	Asp	Glu	Met	Asn	Cys	Ser	Ala	Thr	Asp
2630						2635					2640			
Cys	Ser	Ser	Tyr	Phe	Arg	Leu	Gly	Val	Lys	Gly	Val	Leu	Phe	Gln
2645						2650					2655			

Pro	Cys	Glu	Arg	Thr	Ser	Leu	Cys	Tyr	Ala	Pro	Ser	Trp	Val	Cys
2660						2665					2670			
Asp	Gly	Ala	Asn	Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Arg	Asp	Cys
2675						2680					2685			
Pro	Gly	Val	Lys	Arg	Pro	Arg	Cys	Pro	Leu	Asn	Tyr	Phe	Ala	Cys
2690						2695					2700			
Pro	Ser	Gly	Arg	Cys	Ile	Pro	Met	Ser	Trp	Thr	Cys	Asp	Lys	Glu
2705						2710					2715			
Asp	Asp	Cys	Glu	His	Gly	Glu	Asp	Glu	Thr	His	Cys	Asn	Lys	Phe
2720						2725					2730			
Cys	Ser	Glu	Ala	Gln	Phe	Glu	Cys	Gln	Asn	His	Arg	Cys	Ile	Ser
2735						2740					2745			
Lys	Gln	Trp	Leu	Cys	Asp	Gly	Ser	Asp	Asp	Cys	Gly	Asp	Gly	Ser
2750						2755					2760			
Asp	Glu	Ala	Ala	His	Cys	Glu	Gly	Lys	Thr	Cys	Gly	Pro	Ser	Ser
2765						2770					2775			
Phe	Ser	Cys	Pro	Gly	Thr	His	Val	Cys	Val	Pro	Glu	Arg	Trp	Leu
2780						2785					2790			
Cys	Asp	Gly	Asp	Lys	Asp	Cys	Ala	Asp	Gly	Ala	Asp	Glu	Ser	Ile
2795						2800					2805			
Ala	Ala	Gly	Cys	Leu	Tyr	Asn	Ser	Thr	Cys	Asp	Asp	Arg	Glu	Phe
2810						2815					2820			
Met	Cys	Gln	Asn	Arg	Gln	Cys	Ile	Pro	Lys	His	Phe	Val	Cys	Asp
2825						2830					2835			
His	Asp	Arg	Asp	Cys	Ala	Asp	Gly	Ser	Asp	Glu	Ser	Pro	Glu	Cys
2840						2845					2850			
Glu	Tyr	Pro	Thr	Cys	Gly	Pro	Ser	Glu	Phe	Arg	Cys	Ala	Asn	Gly
2855						2860					2865			
Arg	Cys	Leu	Ser	Ser	Arg	Gln	Trp	Glu	Cys	Asp	Gly	Glu	Asn	Asp
2870						2875					2880			

Cys	His	Asp	Gln	Ser	Asp	Glu	Ala	Pro	Lys	Asn	Pro	His	Cys	Thr
2885						2890					2895			
Ser	Pro	Glu	His	Lys	Cys	Asn	Ala	Ser	Ser	Gln	Phe	Leu	Cys	Ser
2900						2905					2910			
Ser	Gly	Arg	Cys	Val	Ala	Glu	Ala	Leu	Leu	Cys	Asn	Gly	Gln	Asp
2915						2920					2925			
Asp	Cys	Gly	Asp	Ser	Ser	Asp	Glu	Arg	Gly	Cys	His	Ile	Asn	Glu
2930						2935					2940			
Cys	Leu	Ser	Arg	Lys	Leu	Ser	Gly	Cys	Ser	Gln	Asp	Cys	Glu	Asp
2945						2950					2955			
Leu	Lys	Ile	Gly	Phe	Lys	Cys	Arg	Cys	Arg	Pro	Gly	Phe	Arg	Leu
2960						2965					2970			
Lys	Asp	Asp	Gly	Arg	Thr	Cys	Ala	Asp	Val	Asp	Glu	Cys	Ser	Thr
2975						2980					2985			
Thr	Phe	Pro	Cys	Ser	Gln	Arg	Cys	Ile	Asn	Thr	His	Gly	Ser	Tyr
2990						2995					3000			
Lys	Cys	Leu	Cys	Val	Glu	Gly	Tyr	Ala	Pro	Arg	Gly	Gly	Asp	Pro
3005						3010					3015			
His	Ser	Cys	Lys	Ala	Val	Thr	Asp	Glu	Glu	Pro	Phe	Leu	Ile	Phe
3020						3025					3030			
Ala	Asn	Arg	Tyr	Tyr	Leu	Arg	Lys	Leu	Asn	Leu	Asp	Gly	Ser	Asn
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<212> PRT
<213> H. sapiens

<400> 11

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Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
35 40 45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
85 90 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
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Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
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Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
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Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

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Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
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Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
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Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
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Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
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Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
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Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
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Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
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Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
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Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
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Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
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Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
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Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
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Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
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Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
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Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
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Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
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Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
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Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
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Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
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Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
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Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
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805 810 815

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Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
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Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
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Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
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Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
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Ala Cys	Pro His	Leu Met	Lys Leu	His Lys	Asp Asn	Thr Thr	Cys
1565			1570			1575	
Tyr Glu	Phe Lys	Lys Phe	Leu Leu	Tyr Ala	Arg Gln	Met Glu	Ile
1580			1585			1590	

Arg	Gly	Val	Asp	Leu	Asp	Ala	Pro	Tyr	Tyr	Asn	Tyr	Ile	Ile	Ser
1595						1600					1605			
Phe	Thr	Val	Pro	Asp	Ile	Asp	Asn	Val	Thr	Val	Leu	Asp	Tyr	Asp
1610						1615					1620			
Ala	Arg	Glu	Gln	Arg	Val	Tyr	Trp	Ser	Asp	Val	Arg	Thr	Gln	Ala
1625						1630					1635			
Ile	Lys	Arg	Ala	Phe	Ile	Asn	Gly	Thr	Gly	Val	Glu	Thr	Val	Val
1640						1645					1650			
Ser	Ala	Asp	Leu	Pro	Asn	Ala	His	Gly	Leu	Ala	Val	Asp	Trp	Val
1655						1660					1665			
Ser	Arg	Asn	Leu	Phe	Trp	Thr	Ser	Tyr	Asp	Thr	Asn	Lys	Lys	Gln
1670						1675					1680			
Ile	Asn	Val	Ala	Arg	Leu	Asp	Gly	Ser	Phe	Lys	Asn	Ala	Val	Val
1685						1690					1695			
Gln	Gly	Leu	Glu	Gln	Pro	His	Gly	Leu	Val	Val	His	Pro	Leu	Arg
1700						1705					1710			
Gly	Lys	Leu	Tyr	Trp	Thr	Asp	Gly	Asp	Asn	Ile	Ser	Met	Ala	Asn
1715						1720					1725			
Met	Asp	Gly	Ser	Asn	Arg	Thr	Leu	Leu	Phe	Ser	Gly	Gln	Lys	Gly
1730						1735					1740			
Pro	Val	Gly	Leu	Ala	Ile	Asp	Phe	Pro	Glu	Ser	Lys	Leu	Tyr	Trp
1745						1750					1755			
Ile	Ser	Ser	Gly	Asn	His	Thr	Ile	Asn	Arg	Cys	Asn	Leu	Asp	Gly
1760						1765					1770			
Ser	Gly	Leu	Glu	Val	Ile	Asp	Ala	Met	Arg	Ser	Gln	Leu	Gly	Lys
1775						1780					1785			
Ala	Thr	Ala	Leu	Ala	Ile	Met	Gly	Asp	Lys	Leu	Trp	Trp	Ala	Asp
1790						1795					1800			
Gln	Val	Ser	Glu	Lys	Met	Gly	Thr	Cys	Ser	Lys	Ala	Asp	Gly	Ser
1805						1810					1815			

Gly	Ser	Val	Val	Leu	Arg	Asn	Ser	Thr	Thr	Leu	Val	Met	His	Met
1820						1825					1830			
Lys	Val	Tyr	Asp	Glu	Ser	Ile	Gln	Leu	Asp	His	Lys	Gly	Thr	Asn
1835						1840					1845			
Pro	Cys	Ser	Val	Asn	Asn	Gly	Asp	Cys	Ser	Gln	Leu	Cys	Leu	Pro
1850						1855					1860			
Thr	Ser	Glu	Thr	Thr	Arg	Ser	Cys	Met	Cys	Thr	Ala	Gly	Tyr	Ser
1865						1870					1875			
Leu	Arg	Ser	Gly	Gln	Gln	Ala	Cys	Glu	Gly	Val	Gly	Ser	Phe	Leu
1880						1885					1890			
Leu	Tyr	Ser	Val	His	Glu	Gly	Ile	Arg	Gly	Ile	Pro	Leu	Asp	Pro
1895						1900					1905			
Asn	Asp	Lys	Ser	Asp	Ala	Leu	Val	Pro	Val	Ser	Gly	Thr	Ser	Leu
1910						1915					1920			
Ala	Val	Gly	Ile	Asp	Phe	His	Ala	Glu	Asn	Asp	Thr	Ile	Tyr	Trp
1925						1930					1935			
Val	Asp	Met	Gly	Leu	Ser	Thr	Ile	Ser	Arg	Ala	Lys	Arg	Asp	Gln
1940						1945					1950			
Thr	Trp	Arg	Glu	Asp	Val	Val	Thr	Asn	Gly	Ile	Gly	Arg	Val	Glu
1955						1960					1965			
Gly	Ile	Ala	Val	Asp	Trp	Ile	Ala	Gly	Asn	Ile	Tyr	Trp	Thr	Asp
1970						1975					1980			
Gln	Gly	Phe	Asp	Val	Ile	Glu	Val	Ala	Arg	Leu	Asn	Gly	Ser	Phe
1985						1990					1995			
Arg	Tyr	Val	Val	Ile	Ser	Gln	Gly	Leu	Asp	Lys	Pro	Arg	Ala	Ile
2000						2005					2010			
Thr	Val	His	Pro	Glu	Lys	Gly	Tyr	Leu	Phe	Trp	Thr	Glu	Trp	Gly
2015						2020					2025			
Gln	Tyr	Pro	Arg	Ile	Glu	Arg	Ser	Arg	Leu	Asp	Gly	Thr	Glu	Arg
2030						2035					2040			

Val	Val	Leu	Val	Asn	Val	Ser	Ile	Ser	Trp	Pro	Asn	Gly	Ile	Ser
2045						2050					2055			
Val	Asp	Tyr	Gln	Asp	Gly	Lys	Leu	Tyr	Trp	Cys	Asp	Ala	Arg	Thr
2060						2065					2070			
Asp	Lys	Ile	Glu	Arg	Ile	Asp	Leu	Glu	Thr	Gly	Glu	Asn	Arg	Glu
2075						2080					2085			
Val	Val	Leu	Ser	Ser	Asn	Asn	Met	Asp	Met	Phe	Ser	Val	Ser	Val
2090						2095					2100			
Phe	Glu	Asp	Phe	Ile	Tyr	Trp	Ser	Asp	Arg	Thr	His	Ala	Asn	Gly
2105						2110					2115			
Ser	Ile	Lys	Arg	Gly	Ser	Lys	Asp	Asn	Ala	Thr	Asp	Ser	Val	Pro
2120						2125					2130			
Leu	Arg	Thr	Gly	Ile	Gly	Val	Gln	Leu	Lys	Asp	Ile	Lys	Val	Phe
2135						2140					2145			
Asn	Arg	Asp	Arg	Gln	Lys	Gly	Thr	Asn	Val	Cys	Ala	Val	Ala	Asn
2150						2155					2160			
Gly	Gly	Cys	Gln	Gln	Leu	Cys	Leu	Tyr	Arg	Gly	Arg	Gly	Gln	Arg
2165						2170					2175			
Ala	Cys	Ala	Cys	Ala	His	Gly	Met	Leu	Ala	Glu	Asp	Gly	Ala	Ser
2180						2185					2190			
Cys	Arg	Glu	Tyr	Ala	Gly	Tyr	Leu	Leu	Tyr	Ser	Glu	Arg	Thr	Ile
2195						2200					2205			
Leu	Lys	Ser	Ile	His	Leu	Ser	Asp	Glu	Arg	Asn	Leu	Asn	Ala	Pro
2210						2215					2220			
Val	Gln	Pro	Phe	Glu	Asp	Pro	Glu	His	Met	Lys	Asn	Val	Ile	Ala
2225						2230					2235			
Leu	Ala	Phe	Asp	Tyr	Arg	Ala	Gly	Thr	Ser	Pro	Gly	Thr	Pro	Asn
2240						2245					2250			
Arg	Ile	Phe	Phe	Ser	Asp	Ile	His	Phe	Gly	Asn	Ile	Gln	Gln	Ile
2255						2260					2265			

Asn	Asp	Asp	Gly	Ser	Arg	Arg	Ile	Thr	Ile	Val	Glu	Asn	Val	Gly
2270						2275					2280			
Ser	Val	Glu	Gly	Leu	Ala	Tyr	His	Arg	Gly	Trp	Asp	Thr	Leu	Tyr
2285						2290					2295			
Trp	Thr	Ser	Tyr	Thr	Thr	Ser	Thr	Ile	Thr	Arg	His	Thr	Val	Asp
2300						2305					2310			
Gln	Thr	Arg	Pro	Gly	Ala	Phe	Glu	Arg	Glu	Thr	Val	Ile	Thr	Met
2315						2320					2325			
Ser	Gly	Asp	Asp	His	Pro	Arg	Ala	Phe	Val	Leu	Asp	Glu	Cys	Gln
2330						2335					2340			
Asn	Leu	Met	Phe	Trp	Thr	Asn	Trp	Asn	Glu	Gln	His	Pro	Ser	Ile
2345						2350					2355			
Met	Arg	Ala	Ala	Leu	Ser	Gly	Ala	Asn	Val	Leu	Thr	Leu	Ile	Glu
2360						2365					2370			
Lys	Asp	Ile	Arg	Thr	Pro	Asn	Gly	Leu	Ala	Ile	Asp	His	Arg	Ala
2375						2380					2385			
Glu	Lys	Leu	Tyr	Phe	Ser	Asp	Ala	Thr	Leu	Asp	Lys	Ile	Glu	Arg
2390						2395					2400			
Cys	Glu	Tyr	Asp	Gly	Ser	His	Arg	Tyr	Val	Ile	Leu	Lys	Ser	Glu
2405						2410					2415			
Pro	Val	His	Pro	Phe	Gly	Leu	Ala	Val	Tyr	Gly	Glu	His	Ile	Phe
2420						2425					2430			
Trp	Thr	Asp	Trp	Val	Arg	Arg	Ala	Val	Gln	Arg	Ala	Asn	Lys	His
2435						2440					2445			
Val	Gly	Ser	Asn	Met	Lys	Leu	Leu	Arg	Val	Asp	Ile	Pro	Gln	Gln
2450						2455					2460			
Pro	Met	Gly	Ile	Ile	Ala	Val	Ala	Asn	Asp	Thr	Asn	Ser	Cys	Glu
2465						2470					2475			
Leu	Ser	Pro	Cys	Arg	Ile	Asn	Asn	Gly	Gly	Cys	Gln	Asp	Leu	Cys
2480						2485					2490			

Leu	Leu	Thr	His	Gln	Gly	His	Val	Asn	Cys	Ser	Cys	Arg	Gly	Gly
2495						2500					2505			
Arg	Ile	Leu	Gln	Asp	Asp	Leu	Thr	Cys	Arg	Ala	Val	Asn	Ser	Ser
2510						2515					2520			
Cys	Arg	Ala	Gln	Asp	Glu	Phe	Glu	Cys	Ala	Asn	Gly	Glu	Cys	Ile
2525						2530					2535			
Asn	Phe	Ser	Leu	Thr	Cys	Asp	Gly	Val	Pro	His	Cys	Lys	Asp	Lys
2540						2545					2550			
Ser	Asp	Glu	Lys	Pro	Ser	Tyr	Cys	Asn	Ser	Arg	Arg	Cys	Lys	Lys
2555						2560					2565			
Thr	Phe	Arg	Gln	Cys	Ser	Asn	Gly	Arg	Cys	Val	Ser	Asn	Met	Leu
2570						2575					2580			
Trp	Cys	Asn	Gly	Ala	Asp	Asp	Cys	Gly	Asp	Gly	Ser	Asp	Glu	Ile
2585						2590					2595			
Pro	Cys	Asn	Lys	Thr	Ala	Cys	Gly	Val	Gly	Glu	Phe	Arg	Cys	Arg
2600						2605					2610			
Asp	Gly	Thr	Cys	Ile	Gly	Asn	Ser	Ser	Arg	Cys	Asn	Gln	Phe	Val
2615						2620					2625			
Asp	Cys	Glu	Asp	Ala	Ser	Asp	Glu	Met	Asn	Cys	Ser	Ala	Thr	Asp
2630						2635					2640			
Cys	Ser	Ser	Tyr	Phe	Arg	Leu	Gly	Val	Lys	Gly	Val	Leu	Phe	Gln
2645						2650					2655			
Pro	Cys	Glu	Arg	Thr	Ser	Leu	Cys	Tyr	Ala	Pro	Ser	Trp	Val	Cys
2660						2665					2670			
Asp	Gly	Ala	Asn	Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Arg	Asp	Cys
2675						2680					2685			
Pro	Gly	Val	Lys	Arg	Pro	Arg	Cys	Pro	Leu	Asn	Tyr	Phe	Ala	Cys
2690						2695					2700			
Pro	Ser	Gly	Arg	Cys	Ile	Pro	Met	Ser	Trp	Thr	Cys	Asp	Lys	Glu
2705						2710					2715			

Asp	Asp	Cys	Glu	His	Gly	Glu	Asp	Glu	Thr	His	Cys	Asn	Lys	Phe
2720						2725					2730			
Cys	Ser	Glu	Ala	Gln	Phe	Glu	Cys	Gln	Asn	His	Arg	Cys	Ile	Ser
2735						2740					2745			
Lys	Gln	Trp	Leu	Cys	Asp	Gly	Ser	Asp	Asp	Cys	Gly	Asp	Gly	Ser
2750						2755					2760			
Asp	Glu	Ala	Ala	His	Cys	Glu	Gly	Lys	Thr	Cys	Gly	Pro	Ser	Ser
2765						2770					2775			
Phe	Ser	Cys	Pro	Gly	Thr	His	Val	Cys	Val	Pro	Glu	Arg	Trp	Leu
2780						2785					2790			
Cys	Asp	Gly	Asp	Lys	Asp	Cys	Ala	Asp	Gly	Ala	Asp	Glu	Ser	Ile
2795						2800					2805			
Ala	Ala	Gly	Cys	Leu	Tyr	Asn	Ser	Thr	Cys	Asp	Asp	Arg	Glu	Phe
2810						2815					2820			
Met	Cys	Gln	Asn	Arg	Gln	Cys	Ile	Pro	Lys	His	Phe	Val	Cys	Asp
2825						2830					2835			
His	Asp	Arg	Asp	Cys	Ala	Asp	Gly	Ser	Asp	Glu	Ser	Pro	Glu	Cys
2840						2845					2850			
Glu	Tyr	Pro	Thr	Cys	Gly	Pro	Ser	Glu	Phe	Arg	Cys	Ala	Asn	Gly
2855						2860					2865			
Arg	Cys	Leu	Ser	Ser	Arg	Gln	Trp	Glu	Cys	Asp	Gly	Glu	Asn	Asp
2870						2875					2880			
Cys	His	Asp	Gln	Ser	Asp	Glu	Ala	Pro	Lys	Asn	Pro	His	Cys	Thr
2885						2890					2895			
Ser	Pro	Glu	His	Lys	Cys	Asn	Ala	Ser	Ser	Gln	Phe	Leu	Cys	Ser
2900						2905					2910			
Ser	Gly	Arg	Cys	Val	Ala	Glu	Ala	Leu	Leu	Cys	Asn	Gly	Gln	Asp
2915						2920					2925			
Asp	Cys	Gly	Asp	Ser	Ser	Asp	Glu	Arg	Gly	Cys	His	Ile	Asn	Glu
2930						2935					2940			

Cys	Leu	Ser	Arg	Lys	Leu	Ser	Gly	Cys	Ser	Gln	Asp	Cys	Glu	Asp
2945						2950					2955			
Leu	Lys	Ile	Gly	Phe	Lys	Cys	Arg	Cys	Arg	Pro	Gly	Phe	Arg	Leu
2960						2965					2970			
Lys	Asp	Asp	Gly	Arg	Thr	Cys	Ala	Asp	Val	Asp	Glu	Cys	Ser	Thr
2975						2980					2985			
Thr	Phe	Pro	Cys	Ser	Gln	Arg	Cys	Ile	Asn	Thr	His	Gly	Ser	Tyr
2990						2995					3000			
Lys	Cys	Leu	Cys	Val	Glu	Gly	Tyr	Ala	Pro	Arg	Gly	Gly	Asp	Pro
3005						3010					3015			
His	Ser	Cys	Lys	Ala	Val	Thr	Asp	Glu	Glu	Pro	Phe	Leu	Ile	Phe
3020						3025					3030			
Ala	Asn	Arg	Tyr	Tyr	Leu	Arg	Lys	Leu	Asn	Leu	Asp	Gly	Ser	Asn
3035						3040					3045			
Tyr	Thr	Leu	Leu	Lys	Gln	Gly	Leu	Asn	Asn	Ala	Val	Ala	Leu	Asp
3050						3055					3060			
Phe	Asp	Tyr	Arg	Glu	Gln	Met	Ile	Tyr	Trp	Thr	Asp	Val	Thr	Thr
3065						3070					3075			
Gln	Gly	Ser	Met	Ile	Arg	Arg	Met	His	Leu	Asn	Gly	Ser	Asn	Val
3080						3085					3090			
Gln	Val	Leu	His	Arg	Thr	Gly	Leu	Ser	Asn	Pro	Asp	Gly	Leu	Ala
3095						3100					3105			
Val	Asp	Trp	Val	Gly	Gly	Asn	Leu	Tyr	Trp	Cys	Asp	Lys	Gly	Arg
3110						3115					3120			
Asp	Thr	Ile	Glu	Val	Ser	Lys	Leu	Asn	Gly	Ala	Tyr	Arg	Thr	Val
3125						3130					3135			
Leu	Val	Ser	Ser	Gly	Leu	Arg	Glu	Pro	Arg	Ala	Leu	Val	Val	Asp
3140						3145					3150			
Val	Gln	Asn	Gly	Tyr	Leu	Tyr	Trp	Thr	Asp	Trp	Gly	Asp	His	Ser
3155						3160					3165			

Leu	Ile	Gly	Arg	Ile	Gly	Met	Asp	Gly	Ser	Ser	Arg	Ser	Val	Ile
3170						3175					3180			
Val	Asp	Thr	Lys	Ile	Thr	Trp	Pro	Asn	Gly	Leu	Thr	Leu	Asp	Tyr
3185						3190					3195			
Val	Thr	Glu	Arg	Ile	Tyr	Trp	Ala	Asp	Ala	Arg	Glu	Asp	Tyr	Ile
3200						3205					3210			
Glu	Phe	Ala	Ser	Leu	Asp	Gly	Ser	Asn	Arg	His	Val	Val	Leu	Ser
3215						3220					3225			
Gln	Asp	Ile	Pro	His	Ile	Phe	Ala	Leu	Thr	Leu	Phe	Glu	Asp	Tyr
3230						3235					3240			
Val	Tyr	Trp	Thr	Asp	Trp	Glu	Thr	Lys	Ser	Ile	Asn	Arg	Ala	His
3245						3250					3255			
Lys	Thr	Thr	Gly	Thr	Asn	Lys	Thr	Leu	Leu	Ile	Ser	Thr	Leu	His
3260						3265					3270			
Arg	Pro	Met	Asp	Leu	His	Val	Phe	His	Ala	Leu	Arg	Gln	Pro	Asp
3275						3280					3285			
Val	Pro	Asn	His	Pro	Cys	Lys	Val	Asn	Asn	Gly	Gly	Cys	Ser	Asn
3290						3295					3300			
Leu	Cys	Leu	Leu	Ser	Pro	Gly	Gly	Gly	His	Lys	Cys	Ala	Cys	Pro
3305						3310					3315			
Thr	Asn	Phe	Tyr	Leu	Gly	Ser	Asp	Gly	Arg	Thr	Cys	Val	Ser	Asn
3320						3325					3330			
Cys	Thr	Ala	Ser	Gln	Phe	Val	Cys	Lys	Asn	Asp	Lys	Cys	Ile	Pro
3335						3340					3345			
Phe	Trp	Trp	Lys	Cys	Asp	Thr	Glu	Asp	Asp	Cys	Gly	Asp	His	Ser
3350						3355					3360			
Asp	Glu	Pro	Pro	Asp	Cys	Pro	Glu	Phe	Lys	Cys	Arg	Pro	Gly	Gln
3365						3370					3375			
Phe	Gln	Cys	Ser	Thr	Gly	Ile	Cys	Thr	Asn	Pro	Ala	Phe	Ile	Cys
3380						3385					3390			

Asp Gly 3395	Asp Asn Asp Cys 3400	Gln Asp Asn Ser Asp 3405	Glu Ala Asn Cys
Asp Ile 3410	His Val Cys Leu 3415	Pro Ser Gln Phe Lys 3420	Cys Thr Asn Thr
Asn Arg 3425	Cys Ile Pro Gly 3430	Ile Phe Arg Cys Asn 3435	Gly Gln Asp Asn
Cys Gly 3440	Asp Gly Glu Asp 3445	Glu Arg Asp Cys Pro 3450	Glu Val Thr Cys
Ala Pro 3455	Asn Gln Phe Gln 3460	Cys Ser Ile Thr Lys 3465	Arg Cys Ile Pro
Arg Val 3470	Trp Val Cys Asp 3475	Arg Asp Asn Asp Cys 3480	Val Asp Gly Ser
Asp Glu 3485	Pro Ala Asn Cys 3490	Thr Gln Met Thr Cys 3495	Gly Val Asp Glu
Phe Arg 3500	Cys Lys Asp Ser 3505	Gly Arg Cys Ile Pro 3510	Ala Arg Trp Lys
Cys Asp 3515	Gly Glu Asp Asp 3520	Cys Gly Asp Gly Ser 3525	Asp Glu Pro Lys
Glu Glu 3530	Cys Asp Glu Arg 3535	Thr Cys Glu Pro Tyr 3540	Gln Phe Arg Cys
Lys Asn 3545	Asn Arg Cys Val 3550	Pro Gly Arg Trp Gln 3555	Cys Asp Tyr Asp
Asn Asp 3560	Cys Gly Asp Asn 3565	Ser Asp Glu Glu Ser 3570	Cys Thr Pro Arg
Pro Cys 3575	Ser Glu Ser Glu 3580	Phe Ser Cys Ala Asn 3585	Gly Arg Cys Ile
Ala Gly 3590	Arg Trp Lys Cys 3595	Asp Gly Asp His Asp 3600	Cys Ala Asp Gly
Ser Asp 3605	Glu Lys Asp Cys 3610	Thr Pro Arg Cys Asp 3615	Met Asp Gln Phe

Gln Cys	Lys Ser Gly His Cys	Ile Pro Leu Arg Trp	Arg Cys Asp
3620	3625	3630	
Ala Asp	Ala Asp Cys Met Asp	Gly Ser Asp Glu Glu	Ala Cys Gly
3635	3640	3645	
Thr Gly	Val Arg Thr Cys Pro	Leu Asp Glu Phe Gln	Cys Asn Asn
3650	3655	3660	
Thr Leu	Cys Lys Pro Leu Ala	Trp Lys Cys Asp Gly	Glu Asp Asp
3665	3670	3675	
Cys Gly	Asp Asn Ser Asp Glu	Asn Pro Glu Glu Cys	Ala Arg Phe
3680	3685	3690	
Val Cys	Pro Pro Asn Arg Pro	Phe Arg Cys Lys Asn	Asp Arg Val
3695	3700	3705	
Cys Leu	Trp Ile Gly Arg Gln	Cys Asp Gly Thr Asp	Asn Cys Gly
3710	3715	3720	
Asp Gly	Thr Asp Glu Glu Asp	Cys Glu Pro Pro Thr	Ala His Thr
3725	3730	3735	
Thr His	Cys Lys Asp Lys Lys	Glu Phe Leu Cys Arg	Asn Gln Arg
3740	3745	3750	
Cys Leu	Ser Ser Ser Leu Arg	Cys Asn Met Phe Asp	Asp Cys Gly
3755	3760	3765	
Asp Gly	Ser Asp Glu Glu Asp	Cys Ser Ile Asp Pro	Lys Leu Thr
3770	3775	3780	
Ser Cys	Ala Thr Asn Ala Ser	Ile Cys Gly Asp Glu	Ala Arg Cys
3785	3790	3795	
Val Arg	Thr Glu Lys Ala Ala	Tyr Cys Ala Cys Arg	Ser Gly Phe
3800	3805	3810	
His Thr	Val Pro Gly Gln Pro	Gly Cys Gln Asp Ile	Asn Glu Cys
3815	3820	3825	
Leu Arg	Phe Gly Thr Cys Ser	Gln Leu Cys Asn Asn	Thr Lys Gly
3830	3835	3840	

Gly	His	Leu	Cys	Ser	Cys	Ala	Arg	Asn	Phe	Met	Lys	Thr	His	Asn
3845						3850					3855			
Thr	Cys	Lys	Ala	Glu	Gly	Ser	Glu	Tyr	Gln	Val	Leu	Tyr	Ile	Ala
3860						3865					3870			
Asp	Asp	Asn	Glu	Ile	Arg	Ser	Leu	Phe	Pro	Gly	His	Pro	His	Ser
3875						3880					3885			
Ala	Tyr	Glu	Gln	Ala	Phe	Gln	Gly	Asp	Glu	Ser	Val	Arg	Ile	Asp
3890						3895					3900			
Ala	Met	Asp	Val	His	Val	Lys	Ala	Gly	Arg	Val	Tyr	Trp	Thr	Asn
3905						3910					3915			
Trp	His	Thr	Gly	Thr	Ile	Ser	Tyr	Arg	Ser	Leu	Pro	Pro	Ala	Ala
3920						3925					3930			
Pro	Pro	Thr	Thr	Ser	Asn	Arg	His	Arg	Arg	Gln	Ile	Asp	Arg	Gly
3935						3940					3945			
Val	Thr	His	Leu	Asn	Ile	Ser	Gly	Leu	Lys	Met	Pro	Arg	Gly	Ile
3950						3955					3960			
Ala	Ile	Asp	Trp	Val	Ala	Gly	Asn	Val	Tyr	Trp	Thr	Asp	Ser	Gly
3965						3970					3975			
Arg	Asp	Val	Ile	Glu	Val	Ala	Gln	Met	Lys	Gly	Glu	Asn	Arg	Lys
3980						3985					3990			
Thr	Leu	Ile	Ser	Gly	Met	Ile	Asp	Glu	Pro	His	Ala	Ile	Val	Val
3995						4000					4005			
Asp	Pro	Leu	Arg	Gly	Thr	Met	Tyr	Trp	Ser	Asp	Trp	Gly	Asn	His
4010						4015					4020			
Pro	Lys	Ile	Glu	Thr	Ala	Ala	Met	Asp	Gly	Thr	Leu	Arg	Glu	Thr
4025						4030					4035			
Leu	Val	Gln	Asp	Asn	Ile	Gln	Trp	Pro	Thr	Gly	Leu	Ala	Val	Asp
4040						4045					4050			
Tyr	His	Asn	Glu	Arg	Leu	Tyr	Trp	Ala	Asp	Ala	Lys	Leu	Ser	Val
4055						4060					4065			

Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile Val Ala Ala
 4070 4075 4080

Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp Val Phe
 4085 4090 4095

Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val Phe
 4100 4105 4110

Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
 4115 4120 4125

Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
 4130 4135 4140

Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp
 4145 4150 4155

Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn
 4160 4165 4170

Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
 4175 4180 4185

Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln
 4190 4195 4200

Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro
 4205 4210 4215

Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu
 4220 4225 4230

Asp Gln Cys Trp Glu His Cys Arg Asn Gly Gly Thr Cys Ala Ala
 4235 4240 4245

Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr
 4250 4255 4260

Lys Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
 4265 4270 4275

Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
 4280 4285 4290

Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys Gln Tyr Arg Gln Cys
 4295 4300 4305

Ser Gly Tyr Cys Glu Asn Phe Gly Thr Cys Gln Met Ala Ala Asp
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Gly Ser Arg Gln Cys Arg Cys Thr Ala Tyr Phe Glu Gly Ser Arg
 4325 4330 4335

Cys Glu Val Asn Lys Cys Ser Arg Cys Leu Glu Gly Ala Cys Val
 4340 4345 4350

Val Asn Lys Gln Ser Gly Asp Val Thr Cys Asn Cys Thr Asp Gly
 4355 4360 4365

Arg Val Ala Pro Ser Cys Leu Thr Cys Val Gly His Cys Ser Asn
 4370 4375 4380

Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln
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Cys Pro Pro His Met Thr Gly Pro Arg Cys Glu Glu His Val Phe
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Ser Gln Gln Gln Pro Gly
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Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
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Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
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Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
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Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
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Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
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Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
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Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
 565 570 575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
 610 615 620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
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Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
 645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
 690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
 705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
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Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
 740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
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Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
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Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
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Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
805 810 815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
835 840 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
850 855 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865 870 875 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
885 890 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
900 905 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
915 920 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
930 935 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945 950 955 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
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Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn
980 985

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Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
 50 55 60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
 65 70 75 80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
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Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
 100 105 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
 115 120 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
 130 135 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
 145 150 155 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
 165 170 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
 180 185 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
 195 200 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
 210 215 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
 225 230 235 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
 245 250 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
 260 265 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
 275 280 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
 290 295 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
 305 310 315 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
 325 330 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
 340 345 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
 355 360 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
 370 375 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
 385 390 395 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
 405 410 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
 420 425 430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
 435 440 445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
 450 455 460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
 465 470 475 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
 485 490 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
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Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
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Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
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Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
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Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
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Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
 580 585 590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
 595 600 605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
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Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
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Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Met Val Asp
 645 650 655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
 660 665 670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
 675 680 685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
 690 695 700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
 705 710 715 720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
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Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
 740 745 750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
755 760 765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
770 775 780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785 790 795 800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
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Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
820 825 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
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Val Pro Pro Gly Gly Arg Leu Val Pro Arg Gly Ser Tyr Pro Tyr Asp
850 855 860

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<400> 14

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35 40 45

Gly Thr Cys Gly Cys Gly Gly Cys Gly Gly Cys Thr Ala Thr Cys Gly
50 55 60

Ala Cys Gly Cys Cys Cys Cys Thr Ala Ala Gly Ala Cys Thr Thr Gly
 65 70 75 80

Cys Ala Gly Cys Cys Cys Cys Ala Ala Gly Cys Ala Gly Thr Thr Thr
 85 90 95

Gly Cys Cys Thr Gly Cys Ala Gly Ala Gly Ala Thr Cys Ala Ala Ala
 100 105 110

Thr Ala Ala Cys Cys Thr Gly Thr Ala Thr Cys Thr Cys Ala Ala Ala
 115 120 125

Gly Gly Gly Cys Thr Gly Gly Cys Gly Gly Thr Gly Cys Gly Ala Cys
 130 135 140

Gly Gly Thr Gly Ala Gly Ala Gly Gly Gly Ala Cys Thr Gly Cys Cys
 145 150 155 160

Cys Ala Gly Ala Cys Gly Gly Ala Thr Cys Thr Gly Ala Cys Gly Ala
 165 170 175

Gly Gly Cys Cys Cys Cys Thr Gly Ala Gly Ala Thr Thr Thr Gly Thr
 180 185 190

Cys Cys Ala Cys Ala Gly Ala Gly Thr Ala Ala Gly Gly Cys Cys Cys
 195 200 205

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 225 230 235 240

Gly Gly Thr Ala Cys Thr Gly Ala Gly Cys Thr Gly Thr Gly Thr Gly
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Thr Thr Cys Cys Cys Ala Thr Gly Thr Cys Cys Cys Gly Cys Cys Thr
 260 265 270

Cys Thr Gly Cys Ala Ala Thr Gly Gly Gly Gly Thr Cys Cys Ala Gly
 275 280 285

Gly Ala Cys Thr Gly Cys Ala Thr Gly Gly Ala Cys Gly Gly Cys Thr
 290 295 300

Cys Ala Gly Ala Thr Gly Ala Gly Gly Gly Gly Cys Cys Cys Cys Ala
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Cys Thr Gly Cys Cys Gly Ala Gly Ala Gly Cys Thr Cys Cys Ala Ala
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Gly Gly Cys Ala Ala Cys Thr Gly Cys Thr Cys Thr Cys Gly Cys Cys
 340 345 350

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Gly Ala Thr Gly Gly Gly Cys Cys Cys Ala Cys Cys Thr Gly Cys Thr
 385 390 395 400

Ala Cys Thr Gly Cys Ala Ala Cys Ala Gly Cys Ala Gly Cys Thr Thr
 405 410 415

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Gly Gly Cys Ala Ala Gly Ala Cys Cys Thr Gly Cys Ala Ala Ala Gly
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Ala Thr Thr Thr Thr Gly Ala Thr Gly Ala Gly Thr Gly Cys Thr Cys
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Ala Gly Thr Gly Thr Ala Cys Gly Gly Cys Ala Cys Cys Thr Gly Cys
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Ala Gly Cys Cys Ala Gly Cys Thr Ala Thr Gly Cys Ala Cys Cys Ala
 485 490 495

Ala Cys Ala Cys Ala Gly Ala Cys Gly Gly Cys Thr Cys Cys Thr Thr
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Cys Ala Thr Ala Thr Gly Thr Gly Gly Cys Thr Gly Thr Gly Thr Thr
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Cys Thr Gly Cys Ala Ala Gly Gly Cys Cys Ala Ala Gly Ala Ala Cys
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Gly Ala Gly Cys Cys Ala Gly Thr Ala Gly Ala Cys Cys Gly Gly Cys
 580 585 590

Cys Cys Cys Cys Thr Gly Thr Gly Cys Thr Gly Thr Thr Gly Ala Thr
 595 600 605

Ala Gly Cys Cys Ala Ala Cys Thr Cys Cys Cys Ala Gly Ala Ala Cys
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Thr Gly Ala Gly Thr Gly Gly Gly Gly Cys Cys Cys Ala Gly Gly Thr
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Ala Cys Gly Ala Gly Cys Ala Cys Gly Cys Gly Gly Cys Ala Gly Ala
 675 680 685

Cys Cys Ala Cys Ala Gly Cys Cys Ala Thr Gly Gly Ala Cys Thr Thr
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Cys Ala Gly Cys Thr Ala Thr Gly Cys Cys Ala Ala Cys Gly Ala Gly
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Ala Cys Cys Gly Thr Ala Thr Gly Cys Thr Gly Gly Gly Thr Gly Cys
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Ala Thr Gly Thr Thr Gly Gly Gly Gly Ala Cys Ala Gly Thr Gly Cys
 740 745 750

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Ala Thr Cys Ala Ala Cys Ala Thr Cys Thr Cys Cys Cys Thr Cys Ala
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Gly Thr Cys Thr Gly Cys Ala Cys Cys Ala Cys Gly Thr Gly Gly Ala
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Thr Cys Thr Ala Cys Thr Thr Thr Gly Thr Gly Gly Ala Thr Gly Ala
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Cys Ala Thr Cys Gly Ala Thr Gly Ala Thr Ala Gly Gly Ala Thr Cys
 900 905 910

Thr Thr Thr Gly Thr Cys Thr Gly Cys Ala Ala Cys Ala Gly Ala Ala
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Ala Thr Gly Gly Gly Gly Ala Cys Ala Cys Ala Thr Gly Thr Gly Thr
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Cys Ala Cys Ala Thr Thr Gly Cys Thr Ala Gly Ala Cys Cys Thr Gly
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Gly Ala Ala Cys Thr Cys Thr Ala Cys Ala Ala Cys Cys Cys Cys Ala
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Ala Gly Gly Gly Cys Ala Thr Thr Gly Cys Cys Cys Thr Gly Gly Ala
 980 985 990

Cys Cys Cys Thr Gly Cys Cys Ala Thr Gly Gly Gly Gly Ala Ala Gly
 995 1000 1005

Gly Thr Gly Thr Thr Thr Thr Thr Cys Ala Cys Thr Gly Ala Cys
 1010 1015 1020

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1040						1045					1050			
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1055						1060					1065			
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1070						1075					1080			
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1085						1090					1095			
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1100						1105					1110			
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1115						1120					1125			
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1130						1135					1140			
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1145						1150					1155			
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1160						1165					1170			
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1175						1180					1185			
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1190						1195					1200			
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1205						1210					1215			
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1220						1225					1230			
Cys	Ala	Cys	Cys	Thr	Gly	Thr	Ala	Cys	Gly	Gly	Cys	Cys	Thr	Gly
1235						1240					1245			

Ala Cys Thr Gly Thr Gly Thr Thr Thr Gly Ala Gly Ala Ala Thr	1250	1255	1260
Thr Ala Thr Cys Thr Cys Thr Ala Thr Gly Cys Cys Ala Cys Cys	1265	1270	1275
Ala Ala Cys Thr Cys Gly Gly Ala Cys Ala Ala Thr Gly Cys Cys	1280	1285	1290
Ala Ala Thr Gly Cys Cys Cys Ala Gly Cys Ala Gly Ala Ala Gly	1295	1300	1305
Ala Cys Gly Ala Gly Thr Gly Thr Gly Ala Thr Cys Cys Gly Thr	1310	1315	1320
Gly Thr Gly Ala Ala Cys Cys Gly Cys Thr Thr Thr Ala Ala Cys	1325	1330	1335
Ala Gly Cys Ala Cys Cys Gly Ala Gly Thr Ala Cys Cys Ala Gly	1340	1345	1350
Gly Thr Thr Gly Thr Cys Ala Cys Cys Gly Gly Gly Thr Gly	1355	1360	1365
Gly Ala Cys Ala Ala Gly Gly Gly Thr Gly Gly Thr Gly Cys Cys	1370	1375	1380
Cys Thr Cys Cys Ala Cys Ala Thr Cys Thr Ala Cys Cys Ala Cys	1385	1390	1395
Cys Ala Gly Ala Gly Gly Cys Gly Thr Cys Ala Gly Cys Cys Cys	1400	1405	1410
Cys Gly Ala Gly Thr Gly Ala Gly Gly Ala Gly Cys Cys Ala Thr	1415	1420	1425
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Cys Ala Gly Thr Ala Thr Gly Gly Gly Ala Ala Gly Cys Cys Gly	1445	1450	1455
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1550						1555					1560			
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Thr	Thr	Cys	Cys	Thr	Cys	Gly	Thr	Gly	Thr	Ala	Thr	Gly	Gly	Cys
1580						1585					1590			
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1595						1600					1605			
Ala	Thr	Cys	Ala	Thr	Cys	Cys	Gly	Gly	Gly	Gly	Cys	Ala	Thr	Gly
1610						1615					1620			
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1625						1630					1635			
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1655						1660					1665			
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1670						1675					1680			
Cys	Gly	Ala	Gly	Cys	Cys	Cys	Thr	Gly	Gly	Ala	Cys	Thr	Thr	Cys
1685						1690					1695			

Cys	Ala	Cys	Gly	Cys	Thr	Gly	Ala	Gly	Ala	Cys	Cys	Gly	Gly	Cys	
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1775						1780					1785				
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1790						1795					1800				
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1805						1810					1815				
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1850						1855					1860				
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1865						1870					1875				
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1880						1885					1890				
Cys	Thr	Gly	Gly	Ala	Gly	Ala	Ala	Ala	Gly	Cys	Thr	Gly	Cys	Thr	
1895						1900					1905				
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1910						1915					1920				

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Ala 1940	Thr	Gly	Ala	Cys	Ala	Cys 1945	Ala	Cys	Cys	Cys	Cys 1950	Ala	Gly	Gly
Gly 1955	Cys	Thr	Ala	Thr	Thr	Gly 1960	Thr	Gly	Gly	Thr	Gly 1965	Gly	Ala	Thr
Cys 1970	Cys	Ala	Cys	Thr	Cys	Ala 1975	Ala	Thr	Gly	Gly	Gly 1980	Thr	Gly	Gly
Ala 1985	Thr	Gly	Thr	Ala	Cys	Thr 1990	Gly	Gly	Ala	Cys	Ala 1995	Gly	Ala	Cys
Thr 2000	Gly	Gly	Gly	Ala	Gly	Gly 2005	Ala	Gly	Gly	Ala	Cys 2010	Cys	Cys	Cys
Ala 2015	Ala	Gly	Gly	Ala	Cys	Ala 2020	Gly	Thr	Cys	Gly	Gly 2025	Cys	Gly	Thr
Gly 2030	Gly	Gly	Cys	Gly	Gly	Cys 2035	Thr	Gly	Gly	Ala	Gly 2040	Ala	Gly	Gly
Gly 2045	Cys	Gly	Thr	Gly	Gly	Ala 2050	Thr	Gly	Gly	Ala	Thr 2055	Gly	Gly	Cys
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